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SOME REFLECTIONS ON THE SCOPE AND METHODS OF A MACRO-ECONOMIC THEORY OF TAX-SHIFTING

by C. GOEDHART

Municipal University of Amsterdam

The historical development of theoretical analysis in the field of the shifting of the incidence of taxation has been stimulated, every now and then, by the development of general economic theory. Just like other doctrines of public finance, the tax-shifting theory has mostly developed on the same lines as general economic thinking, though with a more or less considerable time-lag.

Probably the most decisive renewal of the tax-shifting theory has taken place, so far, through the rather rapid application of the theoretical apparatus of Marshallian partial equilibrium analysis. During the first half of the 20th century, the further development of the tax-shifting theory has lagged rather far behind the process of modernization of general economic theory, notably behind the two main streams of thought that have been dominating economic thinking since the early thirties: the further elaboration of the partial equilibrium theory through a more and more refined analysis of the impact of various degrees of competition (monopoly, oligopoly, degrees of monopolistic competition, pure competition) on the one hand and the elaboration of macro-economic models on the other hand.

Systematic efforts to apply modernized partial equilibrium analysis to the theory of tax-shifting have been made only very gradually. A. L. Meyers' chapters on shifting and incidence of taxation in his book „Modern Economic Problems" (first edition: 1939) contained one of the first systematic expositions on the shiftability forward and backward of various tax categories under varying assumptions concerning the degree of competition on both sides of the markets under consideration. Nevertheless, similar elaborations of micro-economic tax-shifting theory are still lacking in many textbooks on public finance.

Even more hesitation was displayed, until recently, in attempts to apply macro-economic analysis in the theory of tax-shifting. Although some elements of macro-economic thought were incidentally introduced during former stages of development (e.g. by A. de Viti de Marco in his famous „First Principles of Public Finance",

1934), most systematic attempts to arrive at a macro-economic approach date from the publication of papers in periodicals during the last few years only. A series of articles, published in the German „Finanz-Archiv" since 1953, mainly called forth by more or less provoking considerations from the side of Carl Föhl, may be mentioned as one of the most stimulating examples.

The time has come to distinguish closely between micro-economic and macro-economic analysis of tax-shifting. Traditional micro-economic theory, based on partial equilibrium assumptions, confines itself to a comparative-static analysis of the influence of taxation on market equilibrium, leaving out of consideration any influence of the Government's collection and use of tax revenue on total demand in the economy, reflected in shifts of demand curves and cost curves in various markets. Pure micro-economic theory mainly tries to focus attention on those shifts of cost-curves, which are the direct result of the character of various taxes as elements of costs of production; shifts of demand curves are very rarely taken into consideration, practically only in as far as these shifts occur in the market of a particular seller as a result of a decrease in the number of monopolistic competitors. Macro-economic analysis of the process of tax-shifting is characterized by — either comparative-static or dynamic — analysis of the effects of the levying and use of taxes on cost conditions as well as on total demand in the economy, influencing the position of demand curves and cost curves in various markets.

The traditional micro-economic theory of tax-shifting gives a sufficiently realistic picture of shifting-processes only for those cases where the influence of changes in tax-rates on total demand is practically negligible. A good example can be found in the case of a small increase in the excise tax levied on one product, playing a minor role in the consumption pattern of the community under consideration. More often, however, the conclusions of pure micro-economic analysis are misleading as to the attainable degree of shiftability of taxes, notably in all cases of variations in tax rates bearing rather heavily upon the total stream of income. Meanwhile, this does by no means warrant the conclusion that it would be wise to scrap most traditional doctrines in the field of the theory of tax-shifting, or simply to consign them to the mausoleum of venerable but old-fashioned ideas. It seems to be more recommendable to construct a modernized theory on the basis of traditional doctrines, i.e. to try to complete the analysis by bringing macro-economic influences on demand- and cost-curves into the picture.

Macro-economic analysis of tax-shifting, based on traditional micro-economic approaches, requires an extension of the theore-

tical casuistry, because this casuistry can no longer be confined to various assumptions as to the type of the tax under consideration, the shapes of the cost-curves in the industries concerned and the degree of competition in the markets, but must be completed with assumptions relating to the macro-economic effects of taxation.

In the first place, assumptions are required as to the way in which the Government uses the tax proceeds. An analysis along broad lines may be confined to three groups of cases, each of which may warrant conclusions different from those of micro-economic theory: the use of additional tax revenue for the financing of additional expenditure (either real expenditure or transfer expenditure), the use of additional tax revenue for retrenchment of the net public debt (gross debt less bank deposits) or diminution of the rate of increase of net public debt and, finally, the use of tax revenue of a certain type as a substitute for tax revenue of another type.

Meanwhile, these assumptions regarding the way of earmarking tax revenue are not sufficient for a macro-economic analysis, because the influence of taxation on demand curves and cost curves through aggregate demand depends not only on the way in which the Treasury does or does not distribute the tax proceeds, but also on possible monetary reactions, induced by taxation, as well as on the state of employment in the economic system. Assumptions as to possible monetary reactions are required because the purchasing-power effect of an increase of the burden of taxation may induce an increase in demand for inflationary means of financing (liquid reserves or bank-credit). The impact of this monetary factor, influencing the position of demand curves in various markets, will be different according to the policy of the moneary authorities concerning the availability of credit and also according to the announcement effect of taxation on business expectations. Assumptions regarding the level of employment are necessary because the effects of changes in aggregate demand on cost curves will be different owing to the presence or absence of bottlenecks in the shape of fully employed resources.

In the third place, it is hardly necessary to argue that macro-economic theories of tax-shifting may be confined to the traditional comparative-static methods of analysis but may also become somewhat more realistic by introducing dynamic elements, showing the time pattern of variations between equilibrium positions. A dynamic theory requires additional assumptions as to the various time-lags involved.

A rapid glance at some possible results of macro-economic tax-shifting analysis is sufficient to show some remarkable diffe-

rences as compared with the outcome of traditional micro-economic analysis.

Let us first briefly consider the group of cases of an increase in tax rates, effected in order to use additional revenue for the financing of additional expenditure. In these cases, the traditional micro-economic analysis of the shiftability of cost-increasing taxes (sales taxes, excise taxes, etc.) leads only to plausible results in so far as the additional government expenditures consist entirely of additional real expenditure and in the absence of any monetary repercussions. Nevertheless, even then one must be aware of the fact that the substitution of public demand for private demand for resources, though perhaps leaving aggregate demand intact, will probably give rise to shifts in demand between various markets, which shifts are left out of consideration by micro-economic analysis. Micro-economic theory is less realistic when, in the absence of an induced monetary expansion, the revenue from enhanced cost-increasing taxes is used for the financing of income transfers. Then, total demand for resources will probably remain intact only in the extreme hypothetical cases where either no inducement to shift the incidence of taxes is present at all — e.g. when taxes only increase fixed costs of monopolists — or the entire burden of the additional tax is shifted backward through a decrease of factor prices. In any other event the danger is rather great that efforts to shift forward result in a decrease of production and employment, initiating a deflationary process of decreasing aggregate demand.

When additional government expenditure is financed by means of additional profit taxes, it is clear that these profit taxes may be partially shifted, even without an induced monetary expansion and even when it is assumed that entrepreneurs are trying to maximize their total profits by making marginal cost and marginal revenue equal. For, in a state of full employment of resources, producers will find themselves confronted with an upward pressure on factor prices, i.e. an increase of marginal cost, which was left out of account by the micro-economic theory.

In so far as a monetary expansion is induced by taxation, it is evident that micro-economic analysis is never in accordance with facts, because — irrespective of the type of taxation — monetary expansion involves a shift of demand curves in various markets. One should not only think of an increased appeal to bank-credits, induced by taxation, but also of possible monetary reactions through Government finance, resulting from additional revenue lagging behind additional expenditure.

Taking as a second group of cases those where additional tax revenue is used for a diminution of net public debt or for a dimi-

nution of the rate of increase of public debt (by substituting taxes for loans), we are confronted with situations in which the financial operations of the government, considered by themselves, have a deflationary effect on aggregate demand, because the purchasing-power is drained by taxation, but the funds thus deflected are not poured back into the income-stream by the government. As these kinds of financial operations will notably occur in connection with public efforts to check an upswing in business activity, the ultimate effect on aggregate demand depends highly on the way in which producers react on the drain of liquid reserves. In so far as the result is an increased degree of business financing through the capital market or — which is very plausible when the Treasury abstains from redemption of debt in the capital market but strengthens its position vis-à-vis the banking-system — through bank-credits, the deflationary effect of taxation may be partially or wholly compensated. This means that the shifts of demand curves in varous markets and therefore also the degree of shiftability of taxes are highly dependent on monetary reactions and on the policy pursued by the monetary authorities.

Perhaps the most interesting differences in results between micro- and macro-economic analysis of tax-shifting can be demonstrated for the third group of cases: those where a certain type of taxes is substituted for another one, e.g. in connection with a policy aiming at a redistribution of real personal income through taxation. Just as in cases of redistribution efforts, undertaken through "positive" and "negative" taxes (subsidies and other forms of income transfers), redistribution pursued by means of changes in the tax structure may often encounter bounds set by tax-shifting processes, which are not or not sufficiently brought out by traditional micro-economic shift-analysis. A good example can be found in the case of attemps at increases of real wage-income through a decrease of taxes on wages accompanied by an increase of profit taxes. In so far as micro-economic analysis is based on the hypothesis that entrepreneurial behaviour is such as to equalize marginal costs and marginal revenue, traditional theories seem to prove that such attempts might be highly successful, because increased pure profit-taxes cannot be shifted. When only the direct effects of taxation on marginal cost are taken into account, it is clear that pure profit taxes do not involve changes in the point of equation of marginal cost and marginal revenue. But as soon as changes in the average propensity to consume, resulting from changes in the tax structure, and their effects on aggregate demand are taken into consideration, marginal revenue will be found to increase in various markets. This means that, even when the above assumptions concerning entre-

preneurial behaviour are maintained, redistribution efforts may be invalidated to a high extent through a process of shifting of the incidence of profit taxes.

These few examples of the implications of the macro-economic aspects of tax shiftability may suffice to demonstrate the necessity of a systematic re-consideration of the theory of tax-shifting, in order to eliminate the lag of tax theory behind general economic thinking again.

CONSIDÉRATIONS SUR LA PORTÉE ET LES MÉTHODES D'UNE THÉORIE MACRO-ÉCONOMIQUE DE LA RÉPURCUSSION DE L'IMPôT

par M. le Professeur C. Goedhart

RÉSUMÉ

Le décalage que, couramment, l'on constate plus ou moins dans le développement de la théorie de la répercussion de l'impôt en regard du développement de la pensée économique en général s'est de nouveau manifesté dans l'application, en cette matière, de l'analyse macro-économique. On peut bâtir, sur la base des doctrines traditionnelles de micro-économie, une théorie macro-économique modernisée en mettant en jeu des influences de macro-économie sur les courbes d'offre et de demande. Ceci exige un élargissement de la casuistique théorique, parce que cette casuistique ne peut plus être restreinte à diverses hypothèses quant au type d'impôt considéré, à la forme des courbes de coût dans les industries intéressées et au degré de concurrence du marché; mais on doit la compléter d'hypothèses qui portent sur les effets macro-économiques de l'imposition: hypothèses concernant la manière dont le gouvernement utilise le montant de l'imposition, peut-être les réactions monétaires sur l'imposition, le niveau de l'emploi et — autant qu'on envisage une analyse dynamique — également des hypothèses quant au décalage qui s'ensuit.

Une analyse faite grosso modo peut être restreinte à trois groupes de cas, choisis suivant la manière dont on utilise le produit de l'impôt: cas d'imposition complémentaire pour le financement de dépenses additionnelles, emploi d'impôts pour la diminution du montant net de la dette publique ou du taux d'accroissement du même montant (par substitution d'impôts aux emprunts) et, en dernier lieu, cas de substitution d'un type d'impôt à un autre. Alors même qu'on ne tient pas compte des réactions monétaires induites par l'impôt, il y a dans tous ces cas de remarquables différences entre les conclusions de l'approche macro-économique d'une part et les conclusions des approches micro-économiques traditionnelles d'autre part, et ces différences sont dues aux effets macro-économiques de l'imposition et de l'emploi de son montant pour agir sur les courbes de demande et d'offre à travers les variations de la demande totale. L'analyse macro-économique démontre aussi qu'une

politique dont le but est une rédistribution de revenu personnel réel par des changements dans la structure de l'impôt peut se trouver entravée par des processus de répercussion de l'impôt qui ne sont pas — ou pas suffisamment — mis en lumière par l'analyse micro-économique traditionnelle de la répercussion de l'impôt.

INFLATION UND STEUERVERTEILUNG

von CARSTEN WELINDER
Universität Lund

Der folgende Aufsatz berührt nicht die Frage in wie weit die Steuerpolitik ein passendes Werkzeug im Kampf gegen die Inflation sei. Sondern hier soll die Bedeutung einer Inflation für die Steuerverteilung behandelt werden. Es wird oft darauf hingewiesen, dass eine Inflation ceteris paribus den Druck seitens der allgemeinen Einkommenssteuer erhöht. Dadurch, dass dasselbe Realeinkommen einen höheren nominellen Wert erhält, wird es auf der progressiven Steuerleiter höher hinaufgeschoben. Gleichzeitig werden die steuerfreien Grundabzüge von geringerer Bedeutung. Dasselbe Realeinkommen muss also eine höhere Steuer bezahlen.

Dies bedeutet nicht die Erhöhung des *totalen* Steuerdruckes. Dieser wird an dem Rückgang der Bedarfsbefriedigung gemessen, den die Besteuerung hervorruft. Der Umstand allein, dass die Steuerzahler auf einen grösseren Teil ihres Einkommens in Form von Steuern verzichten müssen, verringert an und für sich nicht die Menge von Gebrauchsartikeln, die sie für den gesamten Rest ihres Einkommens kaufen können. Diese Menge kann nur dadurch vermindert werden, dass entweder die Steuererhöhung das Nationalprodukt reduziert oder, dass der Staat einen erhöhten Teil davon für seine Zwecke verwendet. Mit andern Worten, wenn das erhöhte Steuereinkommen nur zur Verbesserung der Budgetbalanz verwendet wird, verursacht es keinen höheren reellen Steuerdruck.

Dagegen ruft eine Inflation für gewöhnlich eine Verschiebung in der Steuerverteilung hervor. Ist nun diese Verschiebung vorteilhaft für grosse oder kleine Einkommensbezieher? Bei einer *proportionalen* Steuer ist die Antwort klar. Der steuerfreie Grundabzug, der bei einer solchen vorzukommen pflegt, unterliegt einer Wertsenkung, die für kleine Einkommensbezieher die verhältnismässig grösste Bedeutung hat. Abgesehen von den Grundabzügen, wird die Steuerverteilung nicht von einer gleichmässigen Einkommenssteigerung beeinflusst. Bei einer *progressiven* Steuer ist der Fall komplizierter. Auch hier werden die kleinen Einkommensbezieher am härtesten dadurch getroffen, dass der steuerfreie Grundabzug an Wert verliert. Ausserdem pflegt die Progression nicht bis zu 100% zu gehen, sondern blebt bei einem niedrigeren Prozentsatz stehen. Für die Einkommensbezieher, die bis an diesen Prozentsatz

herankommen, bedeutet eine Einkommenssteigerung, dass ein höherer Teil ihres Einkommens proportional besteuert wird.

Auch wenn die Inflation eine relativ grössere Steuererhöhung für die kleineren als für die grösseren Einkommensbezieher verursache, so braucht dies nicht eine Verschiebung des Steuerdruckes zum Vorteil der Letzteren zu bedeuten. Dies klingt vielleicht paradox, kann jedoch durch ein einfaches numerisches Beispiel illustriert werden.

Bruto-einkommen N	Fall I		Fall II	
	Steuer-satz S (N)	Netto-einkommen N[1—S(N)]	Steuer-satz S (N)	Netto-einkommen N[1—S(N)]
10.000	10	90.000	10	9.000
20.000	20	16.000	29,6	14.080
30.000	28	21.600	38,4	18.480
40.000	35	26.000	45,7	21.720
50.000	40	30.000	48,9	25.550
60.000	44	33.600	52,1	28.740
70.000	48	36.400	54,6	31.780
80.000	52	38.400	56,7	34.640
90.000	56	39.600	58,4	37.440
100.000	60	40.000	60	40.000

In der obenstehenden Tabelle enthält Spalte 1 das Einkommen vor dem Steuerabzug oder kurz gesagt, das *Bruttoeinkommen*. Hier werden zwei Steuertarife angegeben sowie die dementsprechenden Einkommen nach Steuerabzug. Die letzteren hier mit *Nettoeinkommen* bezeichnet. Angenommen der Erhebungsprozentsatz ist 100. Wir nehmen zuerst an, dass A ein Einkommen von 10 000 Kr. und B von 50 000 Kr. hat sowie, dass beider Einkommen verdoppelt wird. Gemäss der Steuerskala, die hier mit Fall I bezeichnet ist, bedeutet die Einkommenssteigerung, dass A's Steuersatz von 10 auf 20 Prozent und B's von 40 auf 60 Prozent steigt. Relativ gesehen ist die Steuer von A mehr gestiegen. Wenn wir von andern Einkommensklassen als denen, die durch A und B repräsentiert werden, absehen, so müssen die kleineren Einkommensbezieher also einen grösseren Teil des totalen Steuerbetrages als früher bezahlen. Hiermit ist jedoch nicht gesagt, welche von Ihnen am härtesten betroffen werden, da dies davon abhängt, von welcher Steuerprogression man meint, dass sie am ehesten der Steuerfähigkeit entspräche. Auch wenn man der Ansicht ist, dass 10 und 40 Prozent eine richtige Steuerverteilung zwischen 10 000 und 50 000 Kr. vornehmen, so

folgt hieraus nicht, dass man auch meint, dass die Steuererhöhung für A auf 20 Prozent härter ist als die für B auf 60 Prozent. Bereits die Unmöglichkeit den Verlauf der Grenznutzenkurve des Einkommens anzugeben, macht, dass man nicht objektiv entscheiden kann, wer am härtesten getroffen wird.

Die Fragestellung kann jedoch präzisiert werden, wenn wir annehmen, dass A's und B's Bruttoeinkommen infolge einer Inflation, die keinerlei *reelle* Veränderungen verursacht, verdoppelt wird. Da das Nationalprodukt also in seiner reellen Grösse unverändert ist, ist auch der reelle Wert des Bruttoeinkommens der Steuerzahler unverändert. Dagegen veranlasst die Inflation eine Verschiebung der Steuerverteilung und damit der Verteilung des Nettoeinkommens. Während man eine Steigerung des Steuerdruckes für verschiedene Einkommensklassen weder objektiv messen noch vergleichen kann, kann man eine Umverteilung eines Realeinkommens von gegebener Grösse konstatieren. Wir sehen, dass die Inflation eine Verschiebung der Steuerverteilung zum Nachteil für B herbeiführt. Freilich war B's Steuerbetrag vor der Inflation 20 mal so gross als der von A, während er jetzt nur 15 mal so grosse ist. Aber während B's Nettoeinkommen vor der Inflation um $3^1/_3$ grösser war als das von A ist es jetzt nur $2^1/_2$ mal so gross. Man kann auch sagen, während A's Nettoeinkommen um $^7/_9$ gestiegen ist, ist B's nur um $^1/_3$ gestiegen. A hat also die Möglichkeit auf Kosten von B einen grösseren Teil des Nationalproduktes als früher zu kaufen. Die gewöhnliche Auffassung, dass eine inflatorische Einkommenssteigerung eine Verschärfung der Steuerprogression, die vor allem die kleineren Einkommensbezieher trifft, veranlasst, beruht also auf einem Missverständnis. Sie geht von einer Erhöhung des Steuerdrucks aus, während in diesem Falle die Verteilung des Nettoeinkommens das Entscheidende ist.

Damit die Besteuerung bei einer Inflation nicht die Einkommensverteilung beeinflusst, muss ein Anwachsen des Bruttoeinkommens von 10 000 auf 20 000 Kr. das Nettoeinkommen in derselben Proportion erhöhen wie eine Einkommenserhöhung von 50 000 auf 100 000 Kr. Der Fall II in der obenstehenden Tabelle ist ein Beispiel für einen solchen Steuertarif. In beiden Fällen steigt das Nettoeinkommen um 56 Prozent. Ist die Progression für höhere Einkommen noch schwächer, so bedeutet die Inflation eine Einkommensverschiebung zu ihren Gunsten. Angenommen z.B., dass der Steuersatz für 100 000 Kr. nur 50% ist. Die Inflation erhöht in diesem Falle A's Nettoeinkommen von 9 000 auf 14 080 Kr. oder wie gesagt um 56 Prozent, während B's Nettoeinkommen um 67% steigt.

Unter einem *inflationssicheren* Steuertarif verstehen wir einen

solchen Tarif, der bei einer gleichmässigen Einkommenssteigerung die Einkommensverteilung nicht beeinflusst — wobei Einkommensverteilung als die Verteilung dessen definiert wird, was hier mit Nettoeinkommen bezeichnet wird. Dagegen beeinflusst er die Steuerverteilung selbst. Man kann freilich sagen, dass bei unverändertem Verhältnis zwischen den Einkommen nach Steuerabzug auch die Steuerverteilung reell gesehen dieselbe ist wie früher. Aber wie aus Spalte 3 hervorgeht, widerspricht das dem gewöhnlichen Sprachgebrauch. Wir sprechen daher weiter unten nicht über Steuerverteilung, sondern über Verteilung der Nettoeinkommen oder da, wo dies nicht missverstanden werden kann, nur über Einkommensverteilung. Die Voraussetzung dafür, dass ein Steuertarif inflationssicher ist, wird durch folgende Formel gezeigt:

$$\frac{N_1\,[1 - S\,(N_1)]}{k\,N_1\,[1 - S\,(k\,N_1)]} = \frac{N_2\,[1 - S\,(N_2)]}{k\,N_2\,[1 - S\,(k\,N_2)]}$$

N_1 und N_2 bezeichnen hier zwei gutdünklich gewählte Einkommen und $S(N_1)$ sowie $S(N_2)$ die ihnen entsprechenden Steuersätze. Unter k verstehen wir den Faktor, womit sich sämtliche Bruttoeinkommen im Verlaufe einer Inflation verfielfachen. Die Voraussetzung für die Inflationssicherheit eines Steuertarifs ist, dass die Gültigkeit der obenstehenden Gleichung unabhängig davon ist, welches N und k wir wählen. Hierfür ist erforderlich, dass $S(N) = 1 - C.N.^a$ wobei C und a Konstanten sind. Diese können berechnet werden, indem man zwei Werte für N und entsprechende Werte für S wählt. In der Tabelle gingen wir davon aus, dass ein Bruttoeinkommen von 10 000 mit 10 Prozent und eines von 100 000 mit 60 Prozent besteuert werden solle, und auf diese Weise erhielten wir $C = 23{,}04$ und $a = -0.3521$. Mit Hilfe hiervon sind die übrigen Steuersätze errechnet worden. Multipla können einfacher berechnet werden. Wenn wir das Nettoeinkommen von 10 000 bzw. 20 000 berechnet haben, dann können wir durch die Multiplikation mit Quoten aus dem letzteren und dem ersteren d h. mit 1,56 das Nettoeinkommen für 40 000 erhalten und durch eine weitere Multiplikation das für 80 000 usw.

Wir haben oben angenommen, dass eine Inflation zu einer gleichmässigen Verdoppelung aller Bruttoeinkommen führt. Würde sie statt dessen diese um z.B. 50% erhöhen, so beeinflusst dies auch nicht die Verteilung der Nettoeinkommen. Ein Bruttoeinkommen von 20 000 wächst in diesem Fall auf 30 000 an und eines von 40 000 auf 60 000. Im Fall II ist das Verhältnis zwischen Nettoeinkommen für 20 000 und für 30 000 dasselbe wie zwischen Nettoeinkommen für 40 000 und für 60 000. Wir sehen auch, dass das

Verhältnis zwischen den Nettoeinkommen für 10 000 und 100 000 dasselbe ist wie das zwischen den Nettoeinkommen für 20 000 und 200 000 usw.

Es existiert eine unbegrenzte Anzahl inflationssicherer Steuertarife. Die politische Bewegungsfreiheit wird jedoch dadurch begrenzt, dass die übrigen Steuersätze gegeben sind, wenn die Steuersätze für zwei Einkommen nach freier Wahl fixiert worden sind. Gehen wir bei der Berechnung von Fall II von der Steuer auf 10 000 und 100 000 aus, dann können wir nicht die Steuer für z.B. 50 000 frei wählen. Es kann jedoch von Interesse sein, die Eigenschaften eines inflationssicheren Steuertarifs näher zu studieren.

Dieser ähnt insoweit den für gewöhnlich in der Praxis vorkommenden Tarifen als die Steuersätze am Anfang stark steigen und gegen Ende nur langsam. Die in der Praxis vorkommenden Steuertarife gehen nach einem gewissen Punkt dazu über porportional zu werden. Dies ist für einen inflationssicheren Steuertarif nicht möglich. So ist im Fall II der Steuertarif für 200 000 = 68,7 Prozent, für 500 000 = 77,3 Prozent und für 1 000 000 = 82,2 Prozent.

Die Frage inwieweit eine gleichmässige Einkommenssteigerung die Verteilung der Nettoeinkommen zum Vorteil von grossen oder kleinen Einkommensbeziehern verschiebt, hat an und für sich nichts mit der Steuerprogression zu tun. Durch Senken der Besteuerung für 10 000 und eine Erhöhung der für 100 000 — wobei auch die übrigen Steuersätze korrigiert werden müssen — kann Fall II progressiver als Fall I werden und dennoch Fall II inflationssicher verbleiben, während Fall I, wie erwähnt, bei einer Inflation die Einkommen zum Nachteil für grosse Einkommensbezieher verschiebt. Anderseits ist auch ein proportionaler Steuertarif, wenn wir von steuerfreien Grundabzügen absehen, inflationssicher, und einem regressiven kann die selbe Eigenschaft gegeben werden. Stattdessen wird die Einkommensverschiebung abhängig von dem Ausdruck:

$$\frac{k\,N\,[1 - S\,(k\,N)]}{N\,[1 - S\,(N)]} = h.$$

wobei N ebenso wie oben ein gutdünkliches Bruttoeinkommen und S(N) den diesem entsprechenden Steuersatz sowie k den Faktor, womit die Inflation sämtliche Einkommen vervielfacht, repräsentiert. Wenn $h<k$ ist, dann ist die Steuerskala progressiv, ist $h = k$, dann ist sie proportional und ist $h>k$, dann ist sie regressiv. Wenn h bei gegebenem k dasselbe ist für grosse wie für kleine Einkommen, dann ist der Steuertarif inflationssicher. Wenn h sinkt, während das

Einkommen bei gegebenem k wächst, dann verschiebt sich das Nettoeinkommen bei einer Inflation zum Nachteil für die grossen Einkommensbezieher, während es sich im gegenteiligen Falle zum Vorteil für diese verschiebt.

Bei progressivem Steuertarif vermehrt eine gleichmässige Einkommensteigerung das Steuereinkommen des Staates in grösserer Proportion als das Bruttoeinkommen wächst. Nehmen wir an, dass die Löhne und Preise im selben Takt wie die Bruttoeinkommen steigen, dann verbessert die Inflation die Budgetbalanz. Dies kann zu einer Senkung des Erhebungssatzes führen. Wie beeinflusst dies nun die Steuerverteilung und damit auch die Verteilung des Einkommens?

Wenn die Steuerskala progressiv ist, dann ist eine Senkung des Erhebungssatzes immer vorteilhaft für die grossen Einkommensbezieher, da ihr Nettoeinkommen in stärkerer Proportion erhöht wird als das der kleinen Einkommensbezieher. Angenommen, eine inflatorische Verdoppelung des Bruttoeinkommens erhöht den Ertrag einer Steuer, die gemäss Alternative II verteilt ist, so stark, dass der Erhebungssatz von 100 auf 75 Prozent gesenkt werden kann. Für einen Steuerzahler mit einem Einkommen von 10 000 Kr. vor der Inflation erhöht sich das Nettoeinkommen in diesem Fall von 9 000 auf 15 560 oder mit 63 Prozent, das für einen Einkommensbezieher mit 50 000 Kr. Bruttoeinkommen vor der Inflation steigt von 25 550 auf 55 000 oder mit nicht weniger als 115 Prozent. Wenden wir uns wieder der Alternative I zu, so ist wie gesagt die inflatorische Einkommenssteigerung für denjenigen von Nachteil, der vor der Inflation ein Bruttoeinkommen von 50 000 hatte, im Vergleich mit dem, der vor der Inflation ein Einkommen von 10 000 hatte. Wenn aber der Erhebungsprozentsatz auf 75 Prozent gesenkt werden kann, dann wird die ursprüngliche Verteilung der Nettoeinkommen ungefähr wiederherstellt.

Damit ein Steuertarif vollständig inflationssicher sein könnte, wäre es erforderlich, dass eine gleichmässige Bruttoeinkommenssteigerung plus einer durch diese veranlasste Senkung des Erhebungssatzes die Verteilung der Nettoeinkommen nicht verschöbe. Ein progressiver Steuertarif, der generell diese Eigenschaft hat, kann nicht konstruiert werden. Es ist nämlich nicht nur die Steuerskala, sondern auch die Einkommensverteilung, die das Steuereinkommen aus einer gegebenen Steurunterlage bestimmt.

Der einzige *feste* Steuertarif, bei dem ein ermässigter Erhebungssatz nicht die Einkommensverteilung beeinflusst, ist der proportionale ohne steuerfreie Grundabzüge. Für den Staat ist dies doch ohne politische Aktualität. Soll eine progressive Steuer inflationssicher sein, dann muss die Einkommenssteigerung für die grossen Ein-

kommensbezieher in so hohem Grade nachteilig sein, dass die ursprüngliche Einkommensverteilung durch die durch die Steuererhöhung ermöglichte Senkung des Erhebungsprozentes, der an und für sich für die grossen Einkommensbezieher vorteilhaft ist, wiederhergestellt wird. Nur wenn man bestimmte Annahmen über die Verteilung des Bruttoeinkommens gemacht hat, dann kann etwas Genaueres über einen solchen Steuertarif ausgesagt werden.

Falls wir nicht voraussetzen, dass der Steuertarif fest sein soll, dann kann ein inflationssicherer Tarif konstruiert werden, indem teils der steuerfreie Abzug und teils auch die verschiedenen Einkommensstufen durch den Index geregelt werden. Angenomen eine Inflation führt bei unverändertem Realeinkommen zu einer gleichmässigen Einkommenssteigerung um 50%. Angenommen der Grundabzug ist 4 000. Die darauf folgende Stufe von 4 000 bis 8 000 wird mit 10 Prozent besteuert, die folgende 8 000 bis 12 000 mit 12 Prozent usw. In diesem Fall darf der Grundabzug auf 6 000 erhöht werden, die erste Stufe ist dann 6 000 bis 12 000 usw. Das Steuereinkommen steigt also um 50 Prozent. Nehmen wir an die Inflation erhöht die Ausgaben des Staates um den selben Betrag, dann gibt es keine Veranlassung zu einer Senkung des Erhebungsprozentsatzes, die die Einkommensverteilung verschieben würde.

Das Problem einen partiell oder generell inflationssicheren Steuertarif zu konstruieren darf nicht mit der Frage einer gerechten Steuerverteilung verwechselt werden. Diese Frage wird aktuell, wenn es gilt einen gesteigerten reellen Steuerdruck zu verteilen, der durch angewachsene öffentliche Ausgaben hervorgerufen wird, während ein inflationssicherer Steuertarif zur Aufgabe hat zu verhindern, dass eine gleichmassige Einkommenssteigerung, die für die Grösse des reellen Nationaleinkommens ohne Bedeutung ist, dennoch die Verteilung des Nettoeinkommens und damit des Lebenstandards beeinflusst.

Angenommen das Geldeinkommen ist so hoch, dass es den Geldwert gefährdet und dass man deshalb beschliesst, es um 10 Prozent zu reduzieren. Dies ist ein ganz anderes Problem als z.B. die Verteilung der Kosten für eine Verstärkung der Wehrmacht. Die Steuern hierfür verringern den Realwert der Einkommenssumme, die für die individuelle Bedarfsbefriedigung zur Verfügung steht. Sie bedeuten mit andern Worten ein Steueropfer, und die Frage ist wie dieses Opfer verteilt werden soll. Dass hierauf keine Antwort gegeben werden kann, die unabhängig ist von politischen Anschauungen, ist selbstverständlich. Sichtet die Steuererhöhung wiederum nur darauf, eine Verschlechterung des Geldwertes zu verhindern, bedeutet dies keine Senkung des reellen Nationalein-

kommens. Meint man, dass dieses vor der Steuererhöhung richtig verteilt war, so liegt kein Grund vor, die Einkommensverteilung zu beeinflussen. Die Steuererhöhung soll also in Form einer proportionalen Steuer auf das Nettoeinkommen stattfinden, d.h. auf dem Betrag der übrig bleibt, nachdem Abzüge für übrige Steuern gemacht worden sind.

Auch die besteuerung einer reellen Einkommenssteigerung kann nicht ohne Rücksicht auf politische Wertsetzung verteilt werden. Die Alternative II geht von einer akzeptierten Einkommensverteilung aus. Solange nicht eine Einkommenssteigerung das gesamte reelle Einkommen verändert gibt es keine Veranlassung, seine Verteilung von der Besteuerung beeinflussen zu lassen. Dagegen ist es eine andere Frage inwieweit ein vermehrtes Realeinkommen in derselben Proportion wie das frühere Einkommen verteilt werden soll. Betrachten wir die historische Entwicklung, so sehen wir, dass die Standardverbesserung vor allem den kleinen Einkommensbeziehern zugute gekommen ist. Zur Jahrhundertwende hatte ein Professor in Schweden — auch nach Steuerabzug — ein sechsmal so grosse Einkommen wie ein Industriearbeiter, während sein Einkommen heute zwei und ein halb mal so gross ist.

Im vorstehenden haben wir die Einkommenssteuer behandelt. Dieselben Überlegungen können mutatis mutandis auf eine Vermögens- oder eine Erbschaftssteuer angewandt werden, insoweit eine Inflation eine gleichmässige Steigerung des nominellen Wertes sämtlicher Aktiva herbeiführt. Wie bekannt verursacht jedoch eine Inflation eine Vermögensverschiebung zwischen Schuldnern und Gläubigern, weshalb die Frage des Grades der Inflationssicherheit der Besteuerung für sie nicht dieselbe Aktualität hat.

In welchem Masse die Verbrauchsbesteuerung inflationssicher ist, hängt von ihrer Struktur ab. Während der reelle Ertrag der Quantitätssteuer in der Regel infolge einer Inflation sinkt, ist der Ertrag der Wertsteuern unabhängiger. Die Voraussetzung dafür, dass der totale reelle Ertrag einer Quantitätssteuer nicht sinkt, ist, dass die relative Preissenkung, die während einer Inflation für Waren eintritt, die mit einer Quantitätssteuer belegt sind, den Absatz im Takt mit der Inflation erhöht. Angenommen eine Ware hat vor der Inflation den Preis p wozu die Quantitätssteuer s kommt. Wir nehmen nun an, dass eine Inflation eine gleichmässige Preiserhöhung aller Waren mit sich führt in der Proportion 1 zu n. Der Käufer muss in diesem Falle für die obenerwähnte Ware $np + s$ bezahlen. In unverändertem Geldwert gemessen ist dies $p + \frac{s}{n}$. Eine relative Preissenkung hat also stattgefunden, von der man annehmen kann, dass sie den Abstatz steigert. Damit der reelle

Wert der Steuer nicht sinkt, muss auch der Absatz im Verhältnis 1 auf n erhöht werden. Dies setzt eine sehr hohe Preiselastizität voraus, näher bestimmt wird e =

$$\frac{n\ (p + s)}{s}$$

Von grösserem Interesse sind in diesem Zusammenhang die Wertsteuern. Theoretisch können sie dieselbe Funktion ausüben wie eine Einkommenssteuer mit vom Index geregeltem Tarif und Abzügen, d.h. der Betrag, der von jedem Steuerzahler erlegt wird, steigt in direkter Proportion zur Geldentwertung. Angenommen ein System von Wertsteuern ist so verteilt wie es nach der herrschenden politischen Auffassung für gerecht gehalten wird. Diese Verteilung darf also von einer gleichmässigen rein nominellen Einkommenssteigerung nicht beeinflusst werden. Angenommen diese führt zu einer gleichmässigen Preissteigerung, so werden die besteuerten Waren im selben Umfange verbraucht werden wie früher. Ein jeder bezahlt eine Steuer, deren nomineller Betrag im Verhältnis der allgemeinen Preissteigerung gestiegen ist und deren reeller Betrag also unverändert ist. Die Inflation hat mit andern Worten die Steuerverteilung nicht beeinflusst. Da das Steuereinkommen des Staates im selben Verhältnis gestiegen ist wie das allgemeine Preisniveau und damit ungefähr wie die Ausgaben des Staates, so gibt die Inflation keine Veranlassung dafür, den Erhebungssatz zu ändern. Auch wenn das obenstehende Beispiel sehr vereinfacht ist, so zeigt es doch, dass sich die inflationssicherste Steuerverteilung, die der Praxis zur Verfügung steht, durch ein System von Wertsteuern erbietet, insofern man nicht bei der allgemeinen Einkommenssteuer mit einem vom Index regulierten Steuertarif arbeiten will.

INFLATION AND TAX DISTRIBUTION

by Professor Carsten Welinder

SUMMARY

The above paper is meant as a contribution to the discussion of the possibility of an inflation-proof distribution of taxation. That is to say that in the case of a general uniform increase of nominal income the real distribution of income is not affected by taxation. By the real distribution of income is meant here the distribution of income after deduction of tax. The construction of distribution of tax burdens that is inflation-proof in this sense is a different problem from that of finding an equitable distribution of taxation. Suppose, for instance, that higher expenditure for defence calls for a tax increase. A heavier burden is then imposed on the tax-payers and the equitable distribution of this burden cannot be objectively determined. On the other hand, the tax increase resulting from a purely inflationary increase of incomes imposes no real burden on the tax-payers. The question as to how to prevent the real distribution of income from shifting all the same is of a purely technical nature.

The author first discusses the mathematical properties of an inflation-proof income tax schedule and illustrates the solution of the problem with a numerical example. An inflation-proof income tax schedule can be either progressive, proportional or regressive. A comparison is made with a progressive rate of the type usually encountered in practice.

The author further deals with the problem of designing a tax schedule that remains inflation-proof also when the increase in the taxable amount due to the inflation permits a decrease of the tax percentage. The proportional tax rate offers the only general solution here if a tax rate controlled by index is to be avoided. Among indirect taxes the general turnover tax permits the most inflation-proof distribution.

INFLATION ET DISTRIBUTION DES IMPÔTS

par M. le Professeur Carsten Welinder

RÉSUMÉ

Le présent article veut être une contribution à la discussion de la possibilité d'une répartition de la taxation indépendante d'une inflation. Ceci veut dire que dans le cas d'une augmentation générale uniforme du revenu nominal la taxation n'influe pas sur la distribution réelle du revenu. Par la distribution réelle du revenu il faut entendre la distribution du revenu après déduction de l'impôt. La construction d'une répartition de la taxation dans ce sens, qui est indépendante d'une inflation, constitute un problème différent de celui de trouver une répartition équitable de la taxation. Supposons, par exemple, que des dépenses plus élevées pour la défense demandent une augmentation de l'impôt. Dans ce cas, une charge plus lourde frappe les contribuables et la répartition équitable de cette charge ne peut pas être déterminée d'une manière objective. D'autre part, l'augmentation de l'impôt qui résulte d'une augmentation des revenus du caractère purement inflatoire n'impose pas de charge réelle aux contribuables. La question de savoir comment on peut prévenir un déplacement de la distribution réelle du revenu, est de caractère purement technique.

L'auteur discute d'abord les propriétés mathématiques d'un tarif de l'impôt sur le revenu indépendant d'une inflation et il illustre la solution du problème à l'aide d'un exemple numérique. Le tarif de l'impôt sur le revenu peut être progressif, proportionnel ou régressif. L'auteur fait une comparaison avec une taxe progressive du type qu'on rencontre habituellement dans la pratique.

Puis, l'auteur traite le problème de la mise au point d'un tarif d'impôt qui ne peut pas être influencé par l'inflation, même si, par suite de l'inflation, l'augmentation de la matière imposable permet une diminution du pourcentage de l'imposition. La taxe proportionnelle présente la seule solution générale s'il faut éviter une taxation contrôlée par l'indice. Parmi les impôts indirects une taxation générale sur le chiffre d'affaires permet une répartition qui est influencée le moins par une inflation.

THE FOUNDATIONS OF HIGHWAY-USER TAXATION

by JOSEPH W. Mc GUIRE

University of Washington, Seattle

Taxation of highway users has developed into a highly involved and controversial subject in recent years. Many alternative methods of taxation have been proposed, in some cases investigated, and put into practice. Each plan has sought that form of taxation which would allocate responsibility most equitably among the many classes of highway users. Needless to add, all have resulted in injustices to certain highway users.

This paper does not aspire to determine the perfect method of allocating taxes among highway users. It does, however, attempt to clarify the confusion that has arisen concerning the proper basis for highway taxation. Users are taxed a determinate amount. This amount is conceived, or justified, by the theory of taxation employed by the state. For example, the state may tax users for the benefits that they obtain from the use of the road. Users may be taxed for their use (in the sense of using-up) of the roads. The taxes may be thought of as repayment for the state's investment in the highway network. Other concepts, and combinations of theories, have also been employed in many states to justify the amount of user taxation. It is these bases, or foundations, of user taxation, that are explored in this paper.

Why should there be user taxation?

The functions of modern government are complex and varied. Many of these activities are deemed so essential to the public welfare in general, and of such great benefit to the community as a whole, that the question of taxation of specific groups of beneficiaries has never arisen. The operations for providing laws, security measures, and other similar governmental services are financed by the community as a whole. The emanations from these functions are so diffused that taxation cannot be permitted to serve as a rationing device among private groups. On the other hand, some operations of government result in direct benefits to certain groups of citizens. These activities usually involve a choice on the part of the individual as to the extent of his participation. For example, individuals may or may not decide to take full advantage of the public parks and playgrounds, institutions of higher learning, or

highways. Indirectly, of course, the entire population benefits to the extent that these assets are used.

The general public has customarily borne the entire cost of public parks and playgrounds, a large part of the cost of public higher education, and a small part, if any, of highway costs. Yet here are three types of governmental facilities which are alike in that they directly benefit certain user groups. Why then is tax responsibility distributed between users and general beneficiaries in different ways? There appear to be two principal reasons for this distinction: (1) The consequences of user taxation, and (2) historical accident. The latter point is not subject to analysis, and arguments concerning historical accidents generally result in the conclusion that this is the way it is done because this is the way it has always been done. The first reason, on the consequences of user taxation, may be examined more deeply in the light of governmental objectives.

The alternatives to public playgrounds and parks are at best poor substitutes for these facilities. If charges were levied upon park and playground users the persons benefiting most from these assets might not be able to use them, so that a tax upon users might have unfavorable indirect consequences for the general welfare. Higher education, likewise, has few inexpensive substitutes, so that if users were charged the full costs of maintaining these institutions, and this deprived of their use, the public welfare might seriously suffer. On the other hand, good substitutes do exist for highway travel, and it would be patently unfair to these alternatives should highway users be completely subsidized. Furthermore, from an economic viewpoint the complete subsidization of highway use might result in a severe misallocation of resources.

The necessity for rationing further differentiates the taxing methods for these government facilities. Public playgrounds are considered so basic to the general welfare that governments should at all times keep supply equated to demand, and should promote their use without limit. It may be desirable, on the other hand, to place a nominal charge upon users of institutions of higher education, in order to limit attendance to those persons who are most deserving and who most desire college training. In the case of highways, rationing (in the form of user taxation) may be absolutely essential to curtail the number of users.

Two other reasons have been given for taxing the road user. If comparisons with other governmental facilities are discarded, and only the matter of highway taxation considered, it may be maintained that users should be taxed because: (1) the tax base is definite, and (2) user taxes are more equitable than general

taxation. Both of these points have been discussed to some extent in other articles [1]).

Alternative bases of highway taxation

During the past twenty-five years a large number of articles. pamphlets, government documents, and books have appeared on the subject of highway taxation. This wealth of literature has produced much useful information, but, unfortunately, has also resulted in a good deal of confusion as to the proper basis for such taxation. It is generally agreed that the users of the roads should be taxed, but there exists little agreement as to the method of taxation or the relevance of the payment. Four basic concepts may be distinguished as representing the purpose of user tax payments. Thus, tax payments have been considered as:

(1) Payments for the benefits received from roads by users.
(2) Payments for the use of the highway. It is often not clear as to the exact meaning of this statement, and use is better considered as two separate concepts:
    (a) The tax is a payment for the use of the road — like a toll; or,
    (b) The tax is a payment for the using-up of the road — similar to depreciation.
(3) Payments for the costs of the highway network.
(4) Payments which are determined by the financial position of the user rather than by any consideration of road factors. These payments are usually summed up in such phrases as "ability to pay" and, "what the traffic will bear."

Each of these considerations, or combinations of two or more, forms the foundation for innumerable highway taxes now in force. The following parts of this paper will attempt to investigate the propriety of each as a base for highway user taxation.

The benefits theory

The most popular and widespread justification of highway taxation for many years has been on the basis of benefits received by users from their travel on public roads. The benefits theory of highway taxation presumes that users should pay for the benefits they receive from their use of the roads. It is essential to note that

[1]) See for example: O. H. Brownlee and W. W. Heller, „Highway Development and Financing," *American Economic Review,* Vol. XLVI, No. 2, May, 1956.

costs and benefits are not synonymous. Everyone benefits from good roads, but everyone does not benefit identically. A pure benefits tax does not necessarily distribute costs among road users in relation to the benefits received by these users. A benefits tax may be completely unrelated to road costs, or for that matter, to any other costs. It is a charge based on benefits received. In order to have a pure benefits tax, therefore, it must be assumed that benefits are measurable in money terms, and that tax payments can be related to benefits. A benefits tax, both theoretically and practically, could produce revenues that were much higher than road costs, or lower than these costs.

The concept of user benefits is broader than the notion of economic benefits. It embraces the latter, but also includes psychic and social benefits obtained by users from the highways. The idea of user benefits to a great extent resembles the concept of economic surplus. Users of the road are enabled to derive surplus benefits from the road if their usecosts (including taxes) are smaller than the maximum costs they would have been willing to bear to use the road. As long as the demand schedule for highway services has some degree of inelasticity, and the price is not set so high that nothing will be purchased, there will be some surplus benefits. Under conditions of pure competition the price obtained between buyer and seller maximizes the total economic surplus in a transaction. The crucial difference between pricing in purely competitive environments and under a benefits theory of taxation is that in the former an attempt is made to maximize economic surplus, while in the latter the objective is to minimize any surpluses that radiate to the buyer from the pricing process. Thus, each road user could be taxed up to the limit of his road benefits, and at the very least should be taxed in proportion to the benefits he receives from the road. The benefits concept, therefore, presumes perfect price discrimination between benefits recipients to obtain the ideal distribution of user taxation.

It has so far proved impossible quantitatively to determine total user benefits since, like utility, benefits are essentially introspective. Despite the apparent disparities in individual benefits, however, it is common to assume that, if the user acts rationally, his marginal benefits must be at least equal to marginal costs. Obviously, marginal benefits would not be less than marginal costs for the individual using the highway, or he would turn to some other form of transportation or not travel at all. Thus, travel on the roads is usually light following a heavy snowfall, indicating that the considered costs of road travel to most users are greater than probable benefits. An indifference curve analysis, therefore, might be worked

out to determine benefits to an individual user at a moment of time. Such an investigation, however, even if it should be successful, would hardly suffice as a base for the allocation of tax responsibility on a continuing basis, even to the one individual user, since his benefits would change with his use of the road and with time.

In general, therefore, the principle of benefits does not provide a foundation for the allocation of tax responsibility among users proportionate to their individual benefits. Furthermore, the prospect of successfully and equitably allocating taxes among users on a benefits basis is not very promising. Finally, any attempts to impose benefits taxation are likely to result in unjust burdens to certain users, and probably in a failure efficiently to allocate traffic among alternative forms of transport.

Use as a basis for taxation

The literature on highway finance often considers user taxation as the payment by vehicle owners for the use of the road. Although the word "use" is ambiguous, it is frequently employed as synonymous with "travel" by vehicles on the roads. It has been advocated, for example, that highway users be taxed for the movement of their vehicles over the roads, and that the total tax paid by any one individual be contingent upon the miles that his vehicles travels, the weight of his vehicle, or some other attribute of his travel. If use, in this sense, is to form the base for highway taxation, it becomes necessary to determine the amount per unit of travel that shall be charged by the state, and to justify this amount. In most cases where tolls are employed the amount of the toll is justified by highway costs, which are considered as being prorated over the user universe. However, if such a plan is used, the justification for taxation, and indeed the tax itself is founded in great part upon costs, and not upon use. Use becomes the method for allocating costs, but the basis for taxation is cost, not use [2]).

In recent years, several economists and engineers, as well as the general public and many legislators, have become increasingly concerned over the mounting social costs of highway travel. Social costs have risen because of the great demand for highway services and the limited supply of roads, which has greatly increased congestion. As a result of this situation proposals have been made to ration road services, thus reducing congestion and increasing social

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[2]) See: Mc Guire, J. W., *Basis for Weight-Distance Taxation in the State of Washington*, Vol. I (Seattle: University of Washington Press, June, 1956), Chapter II for further comments.

benefits, by placing a toll upon road users [3]). These schemes generally consist of a plan to establish prices (or tolls, or taxes) on highway services, to curtail road use, based upon social costs. In terms of social cost, the highway problem is essentially one of peak load. Usually, the plan calls for the use price to vary with peak periods, or over roads with different traffic densities, so that users driving during periods of greatest congestion would pay a higher tax than those traveling when traffic moves freely.

Taxes based upon social costs have not been employed in any state, possibly because of two reasons. First, such taxes appear to be impractical, and second, they are too nebulous to be satisfactory. The enforcement of a tax scheme that would tax users more at certain times of the day, or during certain holidays in the year, would be costly and difficult. It also might bring about a shifting of peak periods, with the result that the structure of taxation also would be forced to change over time, probably with inherent lags behind the physical changes in peak traffic conditions.

If a tax plan based upon social costs could be put into effect, there would still remain the troublesome problem of determining the amount of the tax. It would be difficult to theorize about the correct amount even under conditions of pure competition, for it is desired that social costs be equated, not minimized, to some arbitrary level set by the administrators of the highway network. The establishment of a price where marginal revenue from tolls equalled the direct marginal costs of the highway services would be unlikely to be exactly at the desired levels of social costs. The tax base would be so vague, therefore, that the discomforting conclusion must be reached that it would be set arbitrarily from investigations into certain levels of social costs. Furthermore, the setting of a price based upon social costs may be completely discordant with the proper allocation of resources among completing forms of transportation [4]). This method of arriving at a tax base. therefore, does not appear particularly promising.

It is frequently claimed that highway user taxes should be conceived of as „rent" paid to the state. Ownership of the highways,

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[3]) See, for example: J. M. Buchanan, „The Pricing of Highway Services" *National Tax Journal,* Vol. V., No. 2, June, 1952.

[4]) It may be argued that such a price would have the advantage of distributing the scarce resource — highway services — more properly among users. As long as the price is set on the basis of social costs, however, it must be, to a certain degree, arbitrary, and thus the efficacy of the price system is subject to the desires of the price makers. These persons, in turn have little basis in the form of quantitative social costs upon which price can be determined.

in this scheme, resides in the state, which "rents" out the roads to users. The definition of ‚rent" is not clearly established and has none of the preciseness customary in economic discussions. It is highly likely that "rent" means not only economic rent [5]), but also includes interest, maintenance, depreciation, and replacement charges, salaries and wages, and probably an element of profit. Thus, the amount of "rent" charged, in this sense, is based primarily upon cost, and only allocated among users by use. Economic rent, since it is a surplus amount above that necessary, in this case, to induce the state to stay in the road building and maintenance business, would not form the proper base for taxation. If the state's charges did include economic rent, in the long run, it would in effect be obtaining a monopoly profit which would misallocate resources.

Possibly the amount of tax the user should properly pay, in the broadest sense of "rent", could be determined through an opportunity cost analysis. Existing roads and vehicles do not have comparable alternative uses. The user, on the other hand, may travel by alternative forms of transport. Prices set by other travel facilities could form the basis for highway user taxes. The entire traffic flow on all types of competing transportation systems could be brought into equilibrium through the correct balancing of prices between alternative modes of travel [6]).

Practically, such a pricing plan might involve serious difficulties. The "rent" charged the user to equate travel costs between different forms of transportation facilities is not easily determined, and experimental charges might be disruptive to traffic allocations. The price paid to use private transport is a total money price, while highway taxation is only a small part of the road user's costs, so that equation of costs might be a serious problem. Also, the price of highway services may act in many cases as a yardstick for the prices set by alternative forms of transportation. The reversal of this guide might lead to monopolistic situations and destroy competition. Finally, alternative transport facilities do not compete at all distances, or at all levels, so that it may be extremely difficult to set a price based upon the prices of competitors. The condition which prevails between different branches of the transportation

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[5]) The return to the owner for the use of resources which is over and above that necessary to retain these resources in active service.

[6]) It must be kept in mind that the prices charged road users, as discussed in this section, are completely disassociated with highway costs. The equilibrium obtained, therefore, would be based primarily upon the economic situation in other branches of the transportation industry. The price obtained might be higher or lower than average costs, even in the long run.

industry might properly be termed a variation of "imperfect oligopoly" [7]). Price reductions or increases under such a market structure may institute unexpected reactions which never will result in stable equilibrium.

The word "use" is often employed as a consumption concept separately from its utilization meaning. The literature of highway finance is replete with cases where writers have meant using-up the road rather than merely traveling over it. Tax proposals have frequently commenced with the observation that vehicles use (-up) the highways in their travels, and thus should be taxed up to the limit of this cost. The attribute of such a plan, of course, is that the amount of tax, in theory at least, is determinate, if it is valid to assume that every time a vehicle travels it uses-up the road over which it moves. Most of these proposals, unfortunately, have not arrived at any satisfactory way of determining the value of the road used-up, and thus the resulting taxes imposed are in the unique position of recovering unknown amounts of costs.

In criticizing this "using-up" proposal, the difficulties of measuring road costs are most frequently noted. Roads are of different types, composed of varying substances, and receive changing intensities of use. Vehicles, likewise, have widely diverse characteristics. In order to employ equitably a tax based upon a using-up concept it would be necessary to segregate a workable number of variables from the large number of mobile factors affecting road costs, and from these arrive at a satisfactory measure of the amount of road used up. It has not been possible to isolate generally agreed upon variables thus far, and it appears unlikely that the amount of road used-up will be found in the near future.

Even if the vexing problems of determining the factors responsible for using-up the road be solved, and the extent of this cost defined, there are more fundamental objections to the "using-up" concept as a foundation for highway taxation. First, the recovery of costs incurred through the deterioration of the roads by use implies the ultimate repayment of the expenditures on existing assets, but permits no provision for future needs. Taxes based upon these costs would not allow for the expansion of this system with collected revenues [8]). Second, if taxes were charged users for their "using-up" of the roads upon which they travel, total road costs would not be covered by tax revenues. The majority of costs incurred by roads are caused by vehicles travelling over the road's

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[7]) Differentiated products, but a small number of alternative producers.

[8]) Additional funds could be collected for future needs through highway taxation, but not if the tax was based solely on the "using-up" principle.

surface. However, there are costs which are not connected with road use. Weather conditions, for example, may deteriorate highways; beautification charges and other costs do not vary with use. These costs could not be included if the tax were to collect only the expenses that occur through the "using-up," of the road by vehicular travel. Use, in the sense of "using-up" does not appear to offer entirely satisfactory conclusions as a foundation for highway taxation: nor is it a convincing means of justifying the payment of these taxes.

Cost as a basis for highway taxation

It is essential that the output of the highway industry of a state be fairly rigorously defined and understood before costs are determined and used as a basis for highway taxation. The highway industry is customarily thought to produce "highway services". Unfortunately, this product is not adequately nor precisely described, and highway services may be interpreted in different ways. At present there exist two important and conflicting approaches to the definition of this product. First, the most widely employed approach has been to define highway services in terms of use; so that the output of the road industry becomes a part of the product consumed by the user in his travels over the highway [9]). The product concept attained through this approach is generally discussed in terms of physical units such as miles travelled, or ton-miles, or axle-miles. Second, the product of the highway industry has been considered as the road itself, with all of its attendant facilities such as snow removal, wayside beautification, policing, etc. This product may be expressed in dollar terms.

The proper concept of output is of vital importance in building the case for cost as the foundation of highway taxation. If output is defined in road use terms the road becomes the fixed capital of the state's highway industry, and is used with variable inputs to produce highway services. On the other hand, if the road itself (with all of its appurtenances) is the output of the state's highway industry, then road building and similar equipment become capital goods employed in conjunction with variable resources to produce highways.

The problem of defining product is common to all industries which produce durable commodities, and is not unique to the highway industry. Output of a durable good may be examined from

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[9]) The vehicle produces the other part of this output. Both vehicles and roads are complementary goods, and the product, road use, can only come into being through the existence of both.

either the consumer or producer viewpoint. The consumer considers paying for the use of the road; the seller produces roads. Razor blade manufacturers produce blades; consumers purchase shaves. A contractor builds homes; a buyer consumes dwelling services. However, in the determination of costs it appears more natural to consider production and product from the point of view of the producer rather than the consumer in these examples.

Costs are more definite and more easily determined when the highway rather than highway use is taken as the product of the highway industry. If the road is considered as output it becomes possible to have highway costs even without use. Also, the relevant costs in determining price are the costs of production rather than the costs of consumption, so that it appears more reasonable to examine the costs of highway construction than the costs of road destruction [10]).

The unit of highway produced may cause some difficulty in levying taxes based upon costs. Obviously, engineers are better qualified than economists to determine the proper unit of output. One engineering study has segregated roads into fewer than ten classes, within each of which roads have similar pavement structures, surfacing, lane and shoulder widths, and other characteristics [11]). Each of these classes could be examined as a separate product of the highway industry of a state, and a unit, such as cubic feet or yards, could be taken as the unit of output of the industry within each particular class of road. Regardless of the physical unit of output used, its average costs and value could be measured in dollar terms. Traditional cost curves could be obtained through the examination of a series of unit-costprices. Average unit fixed costs would decrease normally in the shortrun as more and more units of highway were produced. From these costs, and from average variable costs of materials, labor, and other mobile resources the average and marginal cost curves could be derived.

Although users may consume highway services, these services cannot be furnished in the absence of roads. At any time, therefore, there is a definite demand for roads. This demand is complex, since the unit of highway demanded is not necessarily identical in each instance. Users may desire the expansion of primary state

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[10]) Using the highway as the product facilitates the incremental cost method, which is generally regarded as the most promising device for the allocation of tax responsibility among users.

[11]) Ekse, Martin I., et al., "Incremental Cost Study," in: Washington State Council for Highway Research, *Allocation of Road and Street Costs, an Equitable Solution to the Problem,* Part I, Section 4 (University of Washington Press, Seattle: June, 1956).

highways, or of access roads, or wider highways, paved or gravelled roads, bridges, or similar products. In most states continuing empirical studies have been undertaken to ascertain these demands, and to construct roads in response to these demands. At present, however, the available evidence on demand is limited to the amount of road used at only one price, and little attention has been given to demand schedules for highway units at varying prices.

Actually, the demand for roads, or road units, is a derived demand, derived from the demand for highway services [12]). A demand curve for roads could be obtained from the demand curve for highway services. In fact, the demand for such services would have to be translated into the demand for highway units prior to the construction of these units. This derived demand schedule would indicate the demand for units of highway at varying prices. Once the demand for roads was derived from the demand for highway services, the marginal revenue curve could also be obtained. The price reached through an analysis of cost and revenue curves would simply be the price that users would have to pay for the output of the state's highway industry. It would not, however, indicate the allocation of this price (cost) among individual users [13]).

Once cost and revenue curves have been established, there still remains an additional problem of pricing at the proper levels. The state is the only firm within its boundaries in the highway industry, and as such assumes monopolistic characteristics. Thus, if the state determines price on the basis of the intersection of marginal cost

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[12]) For cost purposes it is more satisfactory to regard the output of the industry as road units, since this method results in tangible, definite, and measurable costs of production. However, from the consumption side, as has been noted, the product must be taken to be highway services. An impasse between what is produced and what is purchased is thus reached, and may be escaped from only by one of two methods: (1) the supply of highways may be related to the demand for highway services, of (2) the demand for highway services related to the highway supply. The novelty of the approach employed herein is that the second method is utilized.

[13]) The tax responsibility of groups of users, and even individual users, may be arrived at without reverting to a total use concept, although such a concept might be used to obtain an equitable allocation of tax responsibility among users. The segregation of costs, as suggested in this analysis, would fit in very well with an incremental cost concept. Flat charges and common costs per unit of basic road could be prorated among all users. Heavier vehicles would pay additional costs based upon the necessity of providing them with stronger, and thus more expensive units of road.

Gross ton-mile or similar weight-distance methods of tax allocation might be used with construction rather than destruction costs also. Such costs of production would provide a firmer foundation for such taxes than that base used in the past.

and marginal revenue curves, an unjustified monopoly profit, and the misallocation of resources and traffic will result. Obviously, equity demands that the price be lowered to some level approximating the prices that would be charged in pure competition.

It is difficult, if not impossible at present, to obtain the correct practical prescription for proper pricing by a monopoly. If welfare is to be maximized, it appears desirable to equate price with marginal cost [14]). As long as price (a measure of social value) is above marginal cost (a measure of social cost), output may be expanded and society will receive net additions to welfare. On the other hand, if marginal cost is below average cost, as it is in an industry with decreasing costs, then marginal-cost-pricing will result in losses, and these losses will have to be financed from other sources. The price-setter, therefore, may have to choose between three alternatives: (1) marginal-cost-pricing, which will maximize social welfare; (2) average-cost-pricing, which will result in normal profits, or (3) marginal-cost-pricing plus funds from other sources. Points one and two appear extreme, and the most satisfactory answer to price policy for the state appears to reside in the compromise solution suggested by point three. Using the cost analysis and derived demand curves previously discussed, and assuming efficient operation of the highway industry by the state, it is possible for average and marginal costs to be close together at the point of maximum production over a long time period, so that the subsidy granted to the highway industry need not be large.

Two important factors resulting in marginal costs below average costs appear pertinent to the production of highways, and should be considered. These elements are: (1) multiunit output, and (2) surplus capacity. Highways are built in large segments, each of which may contain many somewhat arbitrary road units. The average cost of each unit, therefore, may be above the cost of producing additional units within the large section. Up to some point marginal cost will remain below average cost. If surplus capacity exists in the form of fixed road building and maintenance or other equipment, the costs of producing additional units of road will be below average costs per unit of output, for overhead charges continue whether production is carried on or not.

Surplus capacity could be minimized through efficient planning and organization, which would bring average costs and marginal

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14) There has been a considerable discussion of marginal-cost-pricing in recent years. One of the most recent books advocating this approach is: B. P. Beckwith, *Marginal-Cost-Price-Output Control* (New York: Columbia University Press, 1955).

costs closer together, although it is doubtful that capacity could be maintained at the maximum level continuously. Careful preparation and planning could also bring down the average unit costs of multi-unit output through steady year-round operation where possible. By means of such operations the effects of multi unit output could be minimized, for instead of separate segments, each unit would be part of the yearly total output. This practice, again, would not eliminate discrepancies between average and marginal costs, but would tend to minimize such differences. Because of location problems each new multi-unit project would have certain moving and initiating costs, but good management could hold these costs to a minimum.

While it may be exceedingly difficult to determine marginal and average costs, and the extent of the difference between them, through good management it does appear possible to reduce this difference considerably, and thus lower the amount of funds needed from other sources.

The differences between marginal and average costs could be made up in a number of ways. Possibly one of the best ways, from an economic viewpoint alone, would be to levy a tax upon the income-earning property of motortransport concerns. This type of tax, which would be independent of the amount actually earned, would maximize income and effort, and permit the firm to be better off than any other type of tax [15]).

Payments unrelated to road factors

Two bases of user taxation, both unrelated in any direct fashion to the road itself, will be briefly considered in this section. First, note will be made of the "what the traffic will bear" argument, and second, "ability to pay" as a base for user taxation will be taken up.

Arguments for equity must underlie any attempt to justify the foundations of taxations. Therefore, a tax based upon what the traffic will bear, when the taxing body has monopolistic powers, has little merit. The price established under this philosophy would tend to maximize returns to the state, highway travel would probably be curtailed drastically, and both traffic and resources would be misallocated to other uses. It is evident that a user tax which has as its premise the concept of what the traffic will bear would result in inequities and would be uneconomic. Thus, such a tax would

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[15]) This tax could be levied as a special license fee upon vehicles, with earning potential taken as ton-miles travelled or to be travelled. Such a tax would encourage the maximum use of equipment.

be impossible to justify. "What the traffic will bear" is hardly a proper basis for highway taxation.

Ability to pay proposals have generally been discarded by students of highway finance, especially when universally levied against all users. The incomes of a majority of users are earned independently of road use, and the relationship between use and income is so tenuous in most instances that a tax based upon ability to pay has been considered unjustifiable. On the other hand, a selective tax based upon ability to pay, limited only to those individuals and firms that receive incomes directly from their use of the road, might not be wholly inappropriate. Unfortunately the ability to pay concept, considered in its pure form without relation to highway costs or benefits, does not permit the establishment of a method for determining the tax amount. The ability to pay notion is actually a method of allocating taxation but in itself does not form the basis for taxation. One criteria for judging the efficacy of a foundation of taxation is that it produces a formula or means for arriving at a definite total sum of tax to be paid. Ability to pay cannot form such a base, for the amount to be charged users cannot be determined by this concept alone.

CONCLUSIONS

Harold M. Groves has recently noted that the best one can hope for in public finance is rough justice and rough economics [16]). This remark appears particularly applicable to the analysis of the foundations of highway taxation presented herein. It seems impossible to determine a perfectly just and proper basis for highway taxation; one which is both workable and equitable. However, despite the grave difficulties involved in attaining perfection, this article has attempted to indicate that there are certain gradations of imperfection, and that some tax foundations appear more appropriate than others. Possibly the most suitable of these is cost, although there may be combinations of methods which also may be as applicable to highway tax problems.

A foundation for highway user taxation may be measured against the criteria of determinability, equity, propriety of resource allocation, and practicability. Taxation based upon use does not, even in theory, meet the requirement that the amount of tax be determinate, for use is the occasion rather than the foundation of high-

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16) *American Economic Review*, Vol. XLVI, No. 2, May, 1956, p. 253.

way taxation. Benefits, on the other hand, could be employed as a basis for taxing users, but are not practicable since the difficulties of measurement at present preclude their proper use. Ability-to-pay schemes fail to satisfy any of the criteria of a correct tax foundation; and what the traffic will bear is unlikely to meet the goals of equity and resource allocation. The most promising approach to highway taxation, therefore, appears to reside in the foundation of road costs. As this paper has indicated, there are serious difficulties in using costs as a tax base, but the merits inherent in this foundation are more encouraging than those of alternative tax proposals.

Thus, in brief, this paper has attempted to clear away some of the confusion, that has existed in highway finance because of the failure to isolate properly the foundations of highway taxation. A somewhat novel approach to highway cost analysis and price determination has also been presented as the most appropriate base for taxing highway users.

LES BASES DES CHARGES FISCALES IMPOSÉES AUX USAGERS DES ROUTES

par M. le Professeur Joseph W. McGuire

RÉSUMÉ

Les usagers des routes paient des sommes d'argent définies aux gouvernements sous forme de taxes sur l'essence, de droits de permis de conduire et, dans certains cas, de droits levés sur le poids ou le kilométrage. Le présent article fait un effort d'explorer la base de ces taxes et, tout en discutant les avantages et les désavantages des principes à la base des charges fiscales en question, de mettre en avant la théorie qui détermine de la façon la plus appropriée le montant total des taxes que devrait payer l'usager de la route. Le but primaire du présent article n'est pas de déterminer la meilleure méthode d'attribution des taxes aux usagers, mais plutôt d'examiner d'une façon théorique la méthode la plus satisfaisante de déterminer et de justifier les taxes.

Aufourd'hui on se sert de quatre concepts pour justifier le but et le montant des taxes imposées aux usagers des routes. Les payements des taxes ont été considérés comme:

1. Payements pour les avantages que les usagers tirent des routes;
2. Payements pour l'utilisation de la route. Le sens exact de cette idée n'est souvent pas clair; aussi vont-il mieux considérer deux idées séparées:
   a. la taxe est un payement pour l'emploi de la route, comme une sorte de péage; ou
   b. la taxe est un payement pour la „consommation" de la route, égal à la dépréciation.
3. Payements pour le coût du réseau routier.
4. Payements qui sont déterminés par la position financière de l'usager plutôt que par une considération des facteurs routiers. Ces payements sont ordinairement indiqués par des phrases comme „capacité de payer" et „ce que le trafic pourra supporter".

Chacune de ces considérations, ou des combinaisons de deux ou plus, forme la base d'un grand nombre des taxes routières maintenant en vigueur. Les parties suivantes de l'article examinent l'opportunité de chacune comme base de la taxation des usagers des routes.

La théorie concernant les avantages est la justification la plus

populaire et la plus appliquée. Cependant, comme cette théorie présuppose une discrimination parfaite entre ceux qui jouissent des avantages, comme ces avantages ne peuvent pas être déterminés quantitativement et qu'une telle taxe résultera probablement en des injustices et une attribution inefficace, elle ne constitue pas une base satisfaisante pour la taxation des usagers des routes.

L'utilisation, dans le sens de „trafic" des véhicules sur les routes, peut servir de base à la taxe, mais elle ne fournit pas des renseignements nécessaires à la détermination de la somme à payer. Par exemple, les coûts des routes peuvent être distribués parmi les usagers selon l'emploi qu'ils en font; mais alors la base de la taxe est le coût et l'utilisation ne sert que de base à l'attribution de ce coût. Les coûts sociaux ont aussi été étudiés comme base de la taxation, mais on les a refusés à cause des difficultés inhérentes à la détermination des coûts sociaux et des problèmes de son application.

L'utilisation dans le sens de „consommation" des routes c.à.d. leur usage, a été proposé également. On discute les problèmes principaux par rapport à la détermination de la quantité de route consommée par les différents types de véhicules et on arrive à conclusion que ce n'est pas une base satisfaisante pour la taxation.

L'application comme base équitable de la taxation de la „capacité de payer" et „ce que le trafic peut supporter" présente tant de problèmes qu'elles doivent être refusés.

Finalement on arrive à la conclusion que la taxation des usagers des routes peut être basée le mieux sur les véritables frais de construction des routes. On discute en détail la théorie des frais et l'on se sert d'une méthode tant soit peu nouvelle pour analyser les frais et déterminer les prix afin de trouver une base pour la taxation à imposer aux usager des routes.

THE STABILIZATION OF THE BOLIVIAN PESO

by O. ERNEST MOORE [1])

Santiago de Chile

The inflation which took place in Bolivia between 1931 and 1956 was more violent and reached greater heights than any inflation heretofore seen in the Western Hemisphere. The note circulation, the cost of living, and the dollar exchange rate rose during this period as follows:

	Note Circulation [2]) (end of year - millions of Bs.) [3])	Cost of Living Index (La Paz)	Dollar Exchange Rate (Bs. per $) [3])
1931	27	100	3.08 (mo.avge.)
1956	148,815	166,362 (end Oct.)	11.604 (Oct. avge.) [4])

As these figures indicate, the note circulation rose during the inflation to a level 5,512 times that of 1931, the dollar exchange rate to 3,768 times the 1931 level, and the cost of living index in La Paz to 1, 664 times the 1931 level. However, the cost of living index failed to show the full force of the price increases which took place, since it was based mainly on officially controlled prices, whereas black market prices of certain essential items were often a multiple of the official quotations.

In its initial phases, the Bolivian inflation was a rather gradual but steady process, and as late as December 1952 the free rate for the dollar was still only about 275 bolivianos per dollar. Thereafter, the exchange position worsened rapidly, as shown below:

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1) The author was in Bolivia from October 1956 to October 1957 as a member of the U.S. Fiscal Mission to that country.

2) Notes issued less those held by the Banking Department of the Banco Central de Bolivia.

3) The currency unit of Bolivia, the *peso boliviano*, is usually referred to as the "boliviano" and abbreviated "B."

4) During October the stabilization program began to be reflected in a lower exchange rate (appreciation of the boliviano); in November the average free rate was 11,346.

Monthly Average	Bs. per U.S. $
December 1952	275
December 1953	950
December 1954	1,850
December 1955	4,018
October 1956	11,604

By early 1956 it was clear that the situation had gotten completely out of hand and that, in the absence of major, comprehensive reforms and large-scale foreign assistance, the Bolivian economy and people were headed for complete chaos.

The reader may better understand the setting of the problem if a few words are said about the Bolivian economy and people. With an area slightly larger than that of France and Spain combined, Bolivia is a landlocked country near the heart of South America, straddling two ranges of the Andes mountains and spreading eastward and downward into the tropical Amazon basin. Of its total population of somewhat more than three millions, some two-thirds are pure Indian, about one fourth are partly Indian, and the rest white. At least two thirds of the inhabitants live at altitudes of 12 to 14 thousand feet on the cold, bleak *altiplano* which lies between the two mountain ranges. In recent years efforts have been made to resettle some of the Indians in the subtropical valleys and lowlands east of the Andes, where the possibilities of agricultural production are much greater. Since the days of the Spanish conquest, Bolivia has been predominantly a mining country, at last so far as its international trade is concerned. Mineral shipments make up over 95 per cent of the total value of the country's exports. In the present century, tin has been by far the most important mineral export, but a dozen or so other minerals are exported in lesser quantities. During recent years oil exploration and development in Bolivia have given very good results. The country is now self-sufficient in oil and oil products (except aviation gasoline) and has begun to export to Argentina, Brazil and other neighboring countries. Upon the completion of new oil pipe-lines to the Atlantic and Pacific Oceans, now being built or in the planning stage, Bolivia will be in position to export oil to countries able and willing to pay for it in free dollars (in lieu of the *convenio* dollars now received under bilateral agreements).

The first impetus to Bolivia's long inflation was given by the Chaco war of 1932 to 1935 with Paraguay. The financial foundations for carrying on that war had been greatly weakened by the world economic depression. From the end of 1931 to the end of 1935, the Bolivian note circulation rose from 26.6 million bolivianos

to 145.9 millions. During this period the Bolivian authorities became accustomed to the maintenance of exchange control and artificial exchange rates. Throughout the war the official exchange quotation was 20 bolivianos per pound sterling, but in the free market the boliviano depreciated to between 40 and 50 to the pound. By 1935 the discrepancy between the two markets had become so wide that two official rates were recognized — the 20 per pound rate for exports and essential imports and a rate of 80 per pound for other transactions.

As so often happens, the financial consequences of the war outlasted the actual fighting. The inflationary process which had made such a vigorous start would have been difficult to arrest in any event, but it was in fact given new stimulus by the resort to central bank financing of extensive public works and of the newly created Government enterprises — an oil monopoly and a mining development bank. As a result, the note circulation increased from 146 million bolivianos at the end of 1935 to 369 millions four years later. New exchange control devices and currency devaluations only made matters worse, and the cost of living index rose at a quickened pace during this period to 733 at the end of 1939 (1931 = 100).

During the Second World War a new force fanned the inflationary fire: a great rise in the value of Bolivia's exports, with its impact on exchange earnings and personal incomes [5]). Despite rising revenues, the Government budget continued to run heavy deficits due largely to development and public works financing. This period saw the financing of two new Government institutions by the Banco Central, namely, a development corporation and an agricultural bank. Also, credit expansion by the private banks, was rapid during these years. From 733 at the close of 1939, the cost of living index rose to 1,882 at the end of 1945.

Following World War II, the pace of inflation was at first somewhat less rapid than it had been either before or during the war. The cost of living index rose from 1,911 in 1945 to 5,041 in 1951, while the note circulation rose during the same period from 1,541 million bolivianos to 3,967 millions. The revolution of April 1952, which entailed nationalization of the big mines producing most of Bolivia's exports and the breaking up of big agricultural land holdings, was like pouring gasoline on a fire which had begun to blaze

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[5]) Total exports rose from U.S. $ 33.8 million in 1939 to $ 80.4 million in 1945; the active trade balance increased from $ 16.5 million to $ 40.1 million between the same years.

less brightly. The miners and peasants, who had won the revolution by defeating the army, were practically the only armed forces in the country. Order and discipline almost vanished from both the mines and the farms, while production costs rose as equipment deteriorated and expensive social benefits were enacted. Both mineral and agricultural output declined, and to make matters worse, the boom prices which Bolivia had been receiving for tin and other minerals during the Korean war began to give way to lower quotations. The new Government mining entreprise (the Corporación Minera de Bolivia, commonly known as COMIBOL), as well as the Government itself, had to turn to the Banco Central for large-scale deficit financing. Beginning in 1953, very substantial emergency help was given by the International Cooperation Administration (Point Four) of the United States Government, mainly in the form of foodstuffs and counterpart funds, but the abnormalities of the Bolivian exchange system were such that a substantial part of the American aid goods did not remain in Bolivia; they could be bought at the artificially low official exchange rate and profitably smuggled into neighboring countries at the free rate. On the other hand, their cheapness was a threat and discouragement to Bolivian agriculture, which could not compete. In 1953 the MNR [6]) Government adopted the first comprehensive program (described below) to stop the inflation and stabilize the currency. As part of this program, the parity of the boliviano was changed from 60 to the dollar to 190 to the dollar. The attempt proved unsuccessful. In the free exchange market the value of the boliviano, which had fallen from 210 to the dollar in December 1951 to 275 in December 1952, and to 650 in May 1953 (when the stabilization program went into effect) fell to 950 in December 1953, to 1,820 in December 1954 and to 4,018 in December 1955. By then it was obvious that the situation was beyond control and that complete ruin stared the country in the face. The tempo of the inflation increased greatly in 1956, as indicated by the following data:

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[6]) The Movimiento Nacionalista Revolucionario, which staged the 1952 revolution, has been in power ever since. The first President of the Republic under the new regime was Dr. Victor Paz Estenssoro. In August 1956 he was succeeded by Dr. Hernán Siles Zuazo.

1956	Free Exchange Rate (mo. avge.)	Note Circulation (end of month - billions of Bs.)	Cost of Living (1953 = 100)
January	4,513	39.7	603
February	4,781	42.4	703
March	5,669	48.9	741
April	5,707	54.9	778
May	6,330	63.2	816
June	6,765	70.6	898
July	8,310	80.8	932
August	8,704	93.2	974
September	10,633	103.5	1,014
October	11,604	119.9	1,451
November	11,347	134.0	1,635

Some of the causes of the Bolivian inflation are clear from the above historical account. While the inflation had its start in the necessities of the Chaco war, the basic reasons why it continued for so long and in the end gained such terrible momentum were: (1) Faulty budgetary and tax policies; (2) an increasingly complex and artificial exchange control system; (3) increasing Government intervention in economic matters (price controls, employment and wage directives, interference with central bank policies, nationalization of economic activities, agricultural reform); (4) overhaste and poor planning in economic development; (5) Bolivia's failure to reach a settlement with the holders of its foreign bonds; and (6) the prevalence of certain socio-political factors growing out of the 1952 revolution. Some of these causes were so closely interwoven that it is difficult to distinguish clearly between them.

Budgetary practices were exceedingly confused and misleading. None of the Government's autonomous agencies was included in the central budget, not even on a net results basis, and the deficits of such entities had to be covered by the central bank, either by direct financing or through exchange rate devices. Moreover, dollar expenditures in the Government budget were calculated at the official rate of exchange, giving the impression at times that there was actually a budget surplus when in fact the central bank was having to finance the difference between the actual and nominal rates of exchange. Tax revenues were derived in too large part from royalties and other taxes on mining and to an inadequate extent from direct taxation. The device of earmarked taxes was greatly overdone, and the number and variety of taxes (many of them doubtless costing more to administer than they produced) was exaggerated, to say the least. In the 1954 budget, for instance, 498 different taxes, charges, fees, etc, were listed. Together with local imposts, the total number of taxes was in the neigborhood of

a thousand [7]). Tax administration, moreover, was sadly deficient.

By the time the new stabilization program was initiated in 1956, the Bolivian exchange control system had become incredibly complex and artificial. In effect, several dozen exchange rates existed. The legal parity and official rate of 190 to the dollar which had been fixed in 1953 still existed side by side with a free market rate ranging from 11,000 to 13,700 to the dollar. In between were the numerous rates resulting from the application in varying degrees of diverse premia to particular types of commodities or enterprises, or even to particular localities. There was also an auction market for the exchange proceeds of gold exports, and so-called *convenio* dollars originating in the bilateral payment agreements with neighboring countries were subject to separate and complicated procedures. Since Government imports came in at the official rate of 190, trucks worth $ 5,000 or more could be and were imported by Government officials at the equivalent of less than $ 100 and in many cases distributed to friends or political allies. Similarly, cattle were imported from neighboring countries at the official rate and driven back over the same frontiers at free rates of exchange. American aid goods, acquired at the 190 rate, went in large part into the hands of black marketeers, either through the company stores of the big mines or through the system of *cupos* (quotas), and long lines of people (known as *coleros,* from *cola,* meaning "queue") could be seen all over La Paz, waiting for hours on end to buy such goods at the official prices in order to resell them at the much higher black market prices.

Government intervention in economic matters had been considerable long before the 1952 revolution. After the revolution it was so all-pervasive that private initiative was almost paralyzed. Not only were the conditions of employment, the size and frequency of salary and wage increases, and rising levels of social security payments and social benefits determined by the State (with active prodding by the mining and other labor unions), but both State and private enterprises were deprived of freedom in the hiring and firing of workers, being required to maintain existing staffs regardless of market conditions. Government price, exchange and trade controls were in themselves a major burden for private enterprise. Government interference with the policies of the central bank was continuous, one law or decree after another compelling the Banco Central to finance new deficits or projects or to make various exceptions to its basic charter. Government measures also hamstrung

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[7]) See "The Revenue Problem of Bolivia", Report by Roger A. Freeman, Tax and Revenue Adviser, U.S. Fiscal Mission to Bolivia (Mimeographed, 1957).

the privately owned commercial banks, which on the one hand were subjected to extremely rigid anti-inflationary reserve requirements in the face of the violent inflationary pressures from non-banking sources and, on the other hand, required to make most of their loans and discounts to industry, with not over 20 per cent going to all other borrowers. The nationalization of the big mines and the distribution of the large agricultural estates among the Indian and half-breed farm laborers were, of course, other types of State intervention, which may or may not have been necessary or even urgent from a socio-political viewpoint. They are mentioned here simply as facts which, occurring at the particular time that they did, made Bolivia's inflation problem much more acute than it would otherwise have been.

Economic development, in large part with central bank financing, began to be pushed by the Bolivian authorities immediately after the Chaco war, which had resulted in the loss to Paraguay of an extensive part of the presumably oil-rich Chaco area. In 1936 were created the Government oil monopoly (Yacimientos Petroliferos Fiscales Bolivianos, or YPFB) and the mining development bank (Banco Minero de Bolivia). An agricultural development bank (Banco Agricola de Bolivia) and a general development institute (Corporación Boliviana de Fomento) were set up a few years later, and in 1953 a planning board (Comision de Coordinación y Planeamiento) was created. Presumably because of the absence of many basic statistics on the Bolivian economy, no comprehensive, detailed and continuous plan of national economic development was ever completed [8]). The Corporacion Boliviana de Fomento launched a variety of projects in various parts of the country, but most of them were too ambitious, too costly, or too poorly planned to make an effective contribution to Bolivia's economic development.

From one point of view, a basic factor in the inflation was Bolivia's status as a defaulter on its foreign indebtedness. So long as successive Bolivian governments made no serious attempt to negotiate and put into effect a settlement of the foreign bondholders' claims which had been defaulted in the early thirties, there was no possibility of interesting the International Bank in giving financial aid. Nor was Bolivia's reputation with private investors helped by the fact that it was the only Latin American country which had not agreed to some sort of settlement, token or otherwise, of its old

[8]) The nearest approach was a plan drawn up in 1954 by a group of technicians under the direction of the then Foreign Minister, Walter Guevara Arze. This plan was drawn up mainly for the purpose of demonstrating to what good use additional American funds could be put. Although it fixed certain priorities, it was not a detailed and continuous plan.

indebtedness. On top of this came the nationalization of the big mines, in which foreigners had owned a substantial interest, and the failure to agree on the amount and method of final compensation (although under an interim arrangement Bolivia has been making sizable annual payments in the form of withholdings from the proceeds of current production of the mines). In the absence of a final settlement with the former mine-owners, some of whose shareholders were American citizens, Bolivia has been unable to interest the U.S. Government in giving financial assistance in the sector where, in recent years, it has been most needed — in the rehabilitation, improvement and extension of the big mines. The consequence of this and other factors has been an uninterrupted decline in mine output and productivity and a corresponding increase in unit cost.

The rise in the cost of mining production — and of the national output generally — has been aggravated and accelerated by the socio-political atmosphere which grew out of the 1952 revolution. In the country's revolutionary attempt to rid itself of a great evil — the stranglehold of a small clique of wealthy mine-owners on the whole political and economic system — the pendulum swung to the opposite extreme of anti-capitalism and labor dictatorship. In effect, the labor unions dominated both the government and the economy, so that all political and economic decisions had perforce to fit into their over-riding philosophy that the "rights" and "social conquests" of the laborers took precedence over all else. Under this philosophy, the "right" to a job could be and was enforced, with resulting loss by both the Government and private employers of their former freedom in hiring and firing. Social security of every sort (except against unemployment, which had been banished by law) was built up to incredibly high levels. Salary and wage increases were enforced frequently and in large amounts to „compensate" for the effects of inflation or to "equalize" the pay of various groups of salaried workers. The mines were compelled to sell to their employees through the company stores large quantities of foodstuffs and other goods at absurdly low prices, thus enabling the mine workers to add substantially to their incomes by black market sales[9]). Strikes were called on the slightest pretext, and workers on strike received full wage and salary payments.

In 1953, when it became clear that Bolivia was headed for monetary and economic chaos in the absence of action, the MNR

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[9]) During the latter stages of the inflation, the mine workers' purchases at the company stores were far in excess of the total wage payments they received, since the profits on sales to the black market of goods purchased out of wages could be largely "reinvested" in additional purchases at the company stores.

Government decided to call a halt to the depreciation of the currency. With the financial assistance of the International Monetary Fund and the help of technicians from both the Fund and the United Nations, decrees were issued in May providing for the following measures:

(1) The number of exchange rates was reduced from six to two — an official rate of 190 to the dollar for trade and most other transactions, and a fluctuating free rate for tourist and certain other transactions — and the legal parity of the boliviano was changed from 60 to 190 to the dollar.

(2) The commercial banks were allowed to buy and sell exchange at the official rate only as agents of the Banco Central and within limits prescribed by it.

(3) An annual exchange budget, prepared by the Banco Central and approved by the Government, was to determine in advance the allocation of official market exchange, both as to expenditures and receipts, among the various users and sources of supply.

(4) A special tax of 50 or 100 per cent (according to the type of goods) was placed on the CIF value of imports.

(5) A tax of 35 bolivianos per dollar was made applicable to the exports of COMIBOL.

(6) Consumer subsidies were abolished, maximum sales prices were fixed for certain goods, the Ministry of Economy was authorized to import and sell essential goods, and rents were frozen.

(7) Wage increases were granted to compensate for the higher prices resulting from the program. These increases amounted to roughly 100 per cent for laborers and 50 per cent for other workers.

(8) Bank portfolios were frozen at the existing level, and the banks were prohibited from lending more than 2 million bolivianos per month to any one borrower without advance permission from the Banco Central. Only their credit balances in the Monetary Department of the Banco Central could be counted by the banks in fulfilling the legal reserve requirements (20 per cent against sight deposits, 10 per cent against time deposits). Any deposits received by a bank in excess of seven times its capital and reserves had to be redeposited in the Banco Central.

(9) The Banco Central was authorized to issue gold "coins" of 7, 14 and 35 grams fine in exchange for newly mined gold of Bolivian origin, such "coins" to be freely salable by the buyers at their current value in Bolivia or abroad.

(10) A Stabilization Office (Oficina de Estabilizacion) was created in the Presidency of the Republic, under the direction of the Superintendent of Banks, who, with the concurrence of certain ministries and the President of the Banco Central, was to advise

the President of the Republic on further measures needed to assure price and wage stability.

As a support to the 1953 program, Bolivia drew on the International Monetary Fund up to the amount of its "gold quota" ($ 2,500,000).

It was soon evident, however, that the inflation had not been stopped. The free exchange rate, which averaged 650 to the dollar in May 1953, after an initial drop to 550 rose to 950 in December, to 1,525 in May 1954, and to 1,820 in December 1954. From then on, its rise was more rapid, to 4,018 in December 1955 and 11,604 in October 1956. The official rate, however, was left nominally unchanged at 190 to the dollar. A variety of new rates were introduced in an effort to adjust to the realities of the situation. Among these were the so-called "revertibles", which involved the payment to the Ministry of Economy of premia based on the differences between the imported costs of certain items and the prices at which those items were sold in various Bolivian localities [10]).

An auction market was set up for the sale of exchange proceeds of gold exports. The rate payable to COMIBOL for its exports was raised in 1955 to 500, early in 1956 to 1,200, and in October 1956 to 3,500. Similar (but not indentical) action was taken with respect to other mineral exports. Until October 1956, however, COMIBOL and other Government entities continued to import at rates far below the rates they received on exports. The resulting net issues of bolivianos by the Banco Central were offset on its books by variously denominated asset accounts which were in reality uncollectible loans to the State, i.e., pure inflation.

Eearly in 1956 the Bolivian Government entered into an agreement with the United States Government to accept the services of a technical mission which could help it work out another stabilization program. In mid-1956 the Chief of the U.S. Fiscal Mission [11]) reached Bolivia and began the consultations which preceded the adoption of an agreed program. He was followed in October and November by the two other members of the mission, and by a group of Monetary Fund technicians who participated actively in the discussion and planning of the new program.

The formal machinery to be used in agreeing upon and carrying out the program was set up by a decree of August 4, which created

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[10]) The amounts paid in to the Ministry were used to subsidize the prices of certain essential foodstuffs, both domestic and imported. They were never included in the Government budget.

[11]) Mr. George Eder, Assistant General Counsel of the International Telephone & Telegraph Co.

a National Monetary Stabilization Council with the President of the Republic as Chairman, the Minister of Finance as Vice-Chairman, and six permanent members (the Ministers of Foreign Affairs, Mines, and National Economy; the Executive Vice-President of the Planning Board; the President of the Banco Central; and the Executive Director of the Council) [12]. The Council was charged with the study and recommendation of appropriate measures to be taken „with respect to economic and financial policy, particularly in matters of budgets, taxes, the investment and expenditure of funds, credit and public service contracts, money, foreign exchange, price controls, and other matters which may affect the internal and external credit of the country or the stability of the currency." The Council was authorized to call upon other Government officials to attend any of its meetings, with a voice in the discussions but without a vote. All Government offices and agencies were required to supply the Council with detailed information on their receipts and expenditures since 1951 and with annual reports and any other needed data.

The decree setting up the Stabilization Council further provided that the Banco Central should make no increase in its note issue and extend no new credit to the Government or its agencies without the unanimous consent of the Council, and that such consent could not be given without the Council's "having previously carefully studied the data and information submitted by the appropriate Technical Adviser."

A very important question which arose before the program was fully worked out was the method of its legal implementation. Should a series of draft laws be prepared for discussion and enactment by the Legislature, or should President Hernán Siles Zuazo (who had taken office only on August 6) obtain full powers to put the program into effect by means of decrees? Since the inflation was proceeding at an increasingly dizzy pace and every day's delay meant a further large increase in the note issue, it was decided that seeking full powers for the President was the only sensible approach. On November 22 the National Congress voted a law granting President Siles Zuazo the desired full powers for a period of one year [13]. This mandate was qualified only by the requirement that the actions

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[12]) Mr. Eder was Executive Director of the Council from its inception until his return to the United States in June 1957; from June to October 1957 the writer was Acting Executive Director. Otherwise, members of the Mission had merely the status of technical advisers to the Council; they attended all meetings but did not vote.

[13]) These powers have recently been renewed for another year.

taken by the President have the concurrence of the Cabinet and the Stabilization Council.

A few days later a Bolivian Government mission consisting of the President of the Banco Central and the Executive Vice-President of the Planning Board, accompanied by the Executive Director of the Council, flew to Washington and New York for a triple purpose: (1) to arrange a settlement of Bolivia's dollar bond indebtedness; (2) to obtain the agreement of the Export-Import Bank to an improved schedule of amortization of its outstanding loans to Bolivia; (3) to negotiate substantial dollar credits as an essential backing for the stabilization program, which by then was in near-final form. The mission reached full agreement with both the Foreign Bondholders Protective Council and the Export-Import Bank. Under the settlement agreed upon with the Bondholders Council, the American bondholders would accept a 10 per cent increase in the principal of the bonds in lieu of all interest payments defaulted since 1931, and they would also accept greatly reduced interest payments (beginning with a ½ per cent payment on July 1, 1957) on the new principal amount of the debt (about $ 62 million) and a postponement of amortization until 1964. For its part, the Export-Import Bank agreed to the spreading of certain amortization payments over a longer period of years, thus easing Bolivia's dollar budget position during the early phase of the stabilization program.

The Bolivian mission expounded to the Executive Directors of the Monetary Fund and to the appropriate U.S. Government officials the scope and content of the stabilization program as it had been worked out in La Paz, and requested financial assitance to guarantee the successful execution of the program. When the mission returned to La Paz some two weeks later, it had the agreement of the Fund to grant a standby credit of $ 7,500,000, that of the International Cooperation Administration to make available $ 10,000,000 for the stabilization fund and the dollar financing of certain imports, and that of the U.S. Treasury to enter into an exchange agreement in the amount of $ 7,500,000 if needed. These credits, totaling $ 25,000,000, were equivalent to more than a 100 per cent cover for the Bolivian note issue at the rate of exchange adopted for the initial stabilization operations.

Upon the mission's return to La Paz, the initial decrees instituting the stabilization program were put in final form, and on Saturday, December 15, they were promulgated. In order to allow time for adjustment to the new exchange system, the banks were kept closed on the following Monday and Tuesday. The basic decree in its first article abolished the multiple rate system by providing that

all exchange and gold transactions should be carried out at a single rate, which was to be determined daily by the Banco Central in the light of fundamental factors of supply and demand. The decree established complete freedom of exchange operations, thus abolishing exchange licences and restrictions of every kind. Similarly, all export and import restrictions and formalities were abolished, except of course for the normal statistical and Customs requirements. Government entities (of which COMIBOL was the most important) were required to sell their export proceeds to the Banco Central; other exporters could dispose of their exchange receipts as they pleased. Government entities could import only in accordance with an officially approved exchange budget; private importers (including even persons not licensed as importers) were subject to no restraint whatsoever. All price controls and all subsidies were done away with. The mines, railways and other enterprises having company stores were prohibited from selling goods through such stores at prices below cost and required to sell at cost plus 10 per cent. Limited upward adjustments in rents and utility rates were authorized. The budgets of all autonomous Government entities and agencies were required to be incorporated on a net basis in the national budget, and such entities and agencies were prohibited from obtaining direct financial assistance from the Banco Central. With a view to reducing the official payroll, Government departments and agencies were prohibited from filling staff vacancies without advance approval in each instance by the Finance Minister. No Government office was to be allowed in future to contract for suppliers' credits abroad without the approval of the President of the Republic.

Obviously such a drastic, overnight change from a fully controlled but inflationary economy to a completely free but stable economy could not be made without serious repercussions on prices and living costs. An exact calculation of the extent to which prices would rise as a result was, however, not possible, for the very reason that no free markets had existed in Bolivia for many years. Special surveys were carried out of prevailing black market and official prices of essential commodities, and on this basis estimates were made of the cost of living increase which would be caused by the abandonment of controls and subsidies and by the de facto devaluation of the boliviano from the prevailing official rate of 190 to the new free rate, estimated at 7,000 or slightly more to the dollar [14]). Given this calculation, it was possible to determine the permissible extent of the wage and salary increases which would

[14]) For exchange transactions formerly carried out in the free market, the new rate of course represented an appreciation of the boliviano.

have to accompany the measures. An increase of 1,300 bolivianos per day for all workers in order to compensate for the effect of the higher exchange rate was determined upon. In addition, special compensation ranging from 450 to 3,950 bolivianos per day was granted to workers in the various mining and other enterprises which had company stores through which their workers had been able to buy goods at especially low prices. With these adjustments, the basic stabilization decree froze all wages and salaries in Bolivia for a period of one year. That the wage and salary adjustments granted as part of the stabilization program were substantial is evident from the new legal minimum pay rates in various occupations. Thus, the minimum daily wage of workers in the nationalized mines is now 7,000 bolivianos, that of the railway and small-mine workers is 4,150 bolivianos, and that of industrial, construction and most other privately employed workers is 3,250 bolivianos.

In addition to the foreign debt settlement and the drastic reform of the country's exchange, trade, price, wage and budgetary systems, the stabilization program contemplated important measures in the fields of taxation, social security, and credit control, as well as steps to raise productivity and make Bolivia more attractive for direct investments by foreign (as well as domestic) enterprises. These measures will be discussed as part of the following summary of the program's implementation during its initial year.

Budget expenditures for 1957 [15]) were estimated at 291 billion bolivianos, to be covered by local revenues estimated at 179 billions, and by the use of United States aid counterpart funds estimated at 112 billions.

Local revenues were to come primarily (over 70 per cent) out of mining royalty taxes and import and export duties. A scale of royalties was fixed for each mineral which allowed for variations of fineness and price. A completely new but temporary tariff, with greatly increased duties (mostly ad valorem), was put into effect. Export duties were levied in a range of 3 to 15 per cent ad valorem (with exemptions for minerals, oil products, and many other commodities). A substantial amount of revenue was to be derived from a new sales tax, levied at 3 per cent on all merchandise transactions with the exception of specified essentials and at 10 per cent on service transactions. The small remaining amount of local revenue was expected to come from income, property, and inheritance taxes; from taxes on the revalorization of fixed assets and of the banks' gold and exchange holdings; and from an increase in stamp taxes and in postal and other communications rates.

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[15]) Bolivia's budget year coincides with the calendar year.

During the early months of 1957 it became apparent that some of the main items of estimated revenue were not giving the expected results. COMIBOL, for instance, found itself unable to pay any of its royalties. The new tariff rates were so high on some items (as much as 300 per cent on automobiles and certain luxury items) that traders and speculators who before the stabilization had actively smuggled goods out of the country began to smuggle goods in, thus reducing the anticipated increase in customs revenue. American aid goods (wheat, flour, rice, etc.) which at the former rate of 190 had been too cheap, were too expensive at the new exchange rate and could not at first be sold, while the lack of local-currency cash on the part of importers, miners and industrialists was holding up the use of Point Four's "purchase authorizations" for imports; consequently, some of the counterpart funds needed to "balance" the budget were not being created. In view of the drop in mineral prices and in COMIBOL's output, no immediate solution could be found for the royalty problem. The customs revenue problem was overcome by pressing forward urgently with the drafting of a new, permanent tariff, which went into effect in midyear. This tariff, while giving reasonable protection to domestic industry and agriculture, reduced the excessively high rates on luxury items which might lend themselves so smuggling, and, with a view to increased revenues, placed moderate duties on items of wide consumption which had previously been subject to little or no taxation. The sale of the American surplus foodstuffs was made possible by reducing to a competitive level the prices at which they were sold to the public, and a special system of low-interest, rediscountable bank credits was worked out to accelerate the use of Point Four "purchase authorizations". In due course, the results of these measures could be seen in a decided improvement of the Government revenues.

The extremely high social security rates which Bolivian employers had been paying [16]) were reduced as part of the stabilization program, which limited employers' contributions to 30 per cent of the payroll (workers' contributions were kept at 7½ per cent). It was felt that these were the maximum rates which could be borne by the Bolivian economy, at least until in the course of time it became much more productive.

Credit controls were tightened from the outset of the program, first by improving administration of the existing 40 per cent bank reserve requirement (which could include a number of things besides cash), second by requiring the banks to keep a marginal cash

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[16]) Totaling 46 per cent.

reserve of 50 per cent against any increase in their deposit liabilities, and third by introducing qualitative credit controls under which the banks were prohibited from making consumer and construction loans and restricted in the extension of other types of loans which would not contribute to a quick increase in the production of consumable goods. The new rules were later simplified by making the content of the two reserve requirements uniform (only balances in the Monetary Department of the Banco Central being eligible as reserves), while at the same time raising the marginal requirement to 75 per cent [17]). At a later stage, when it was observed that the excess reserves of the Banking Department of the Banco Central were rising very rapidly, and in turn stimulating a rapid rise in the Department's portfolio, the Stabilization Council temporarily prohibited any further increase in the portfolio of the Department; subsequently, by transferring all counterpart funds from the Banking Department to the Monetary Department, the excess reserves were eliminated.

The initial rate chosen for exchange sales under the stabilization program was 7,750. The rate was reviewed at the end of each day by the President of the Banco Central, in consultation with the Representative of the Monetary Fund [18]) and the Financial Adviser of the Fiscal Mission, and was modified if basic supply and demand trends seemed to warrant a change. In the first few weeks of operations, the rate declined to below 7,500. A reversal of trend then took place, and the rate gradually rose to above 8,900. The basic reasons for the reversal were the diminishing output of COMIBOL, the decline in mineral prices on world markets, and the development of a bitter struggle between the right and left wings of the Government party over the stabilization program. The left wing of the MNR, under the leadership of Juan Lechin (who, in addition to being the head of the central labor organization, was also President of the Senate), insisted that the compensatory pay adjustments which had been made in December were inadequate and must be raised. The other wing of the party, under the leadership of President Siles Zuazo, rightly maintained that any increase in the pay adjustments would merely result in a corresponding or greater adjustment of the exchange rate, which would entail the danger of a new inflationary spiral, and that wages and salaries could be

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[17]) The ordinary reserve requirement of 40 per cent was replaced by a "semifreezing" of the banks' existing balances in the Monetary Department, which in most cases amounted to about 30 per cent of their deposit liabilities. The banks could draw down these balances only by subjecting themselves to a fine.

[18]) The presence of an IMF Representative in Bolivia since December 1956 has contributed greatly to the successful implementation of the program.

raised only after an increase in productivity was achieved. The threat of a general strike to compel the desired adjustments was quickly reflected in heavy pressure on the exchange market. By the time the strike threat had vanished, it was no longer possible to return to the 7,400-7,700 rate level, in view of the rapid deterioration of mineral production and prices. However, the rate of exchange did improve slightly until it attained a new stability in the 8,600-8,700 range, where it has remained for the past several months.

Some elaboration of the labor factor, as it revolved around the compensation and cost of living question, is called for. The initial impact of the program on prices was to send them sky-rocketing. Although already on the second day of stabilization the exaggeratedly high prices began to give way under the free play of a plentiful supply and a reluctant demand [19]), the drop was gradual and its continuance was a matter of some uncertainty, at least among the illiterate masses. A week or so after the stabilization, the workers at some of the biggest mines and on the railways went on strike in order to get an improvement in the pay adjustments made under the program. This, of course, threatened to put a quick end to currency stabilization. When the strike began, President Siles Zuazo announced to a startled nation that he, too, was going on strike — on a hunger strike which would not end until the workers had returned to their jobs. This move had an electric effect and aroused tremendous popular sympathy and manifestations in favor of the President and the stabilization program. The strike movement at once collapsed.

By May 1957 the new Bolivian cost of living index showed a drop of about 20 per cent from the immediate post-stabilization level and was still falling. Nevertheless the COB (Bolivia's central labor organization) under the domination of Juan Lechin was preparing to vote, at its June Congress in La Paz, a general strike to compel new wage and salary adjustments. Despite an eloquent plea for sanity by President Siles Zuazo at the opening session of the Congress, the COB leaders insisted on the strike call. The President asked to be heard again by the Congress and in simple but moving language explained the impossibility of new adjustments. Yet the strike call was voted, on the left-wing leaders' insistence. The President then decided to take his case directly to the workers in the mining and certain other provincial areas. The directness and since-

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[19]) By March 1957 a 200-gram loaf of bread, which on the day after stabilization had cost Bs. 600, was down to Bs. 200 or less. During the same interval the price of a kilo of meat dropped from Bs. 8-10.000 to Bs. 3.000.

rity of the President during his tour of these areas had the remarkable result of causing the local unions one by one to announce their opposition to a general strike and their continued adherence to the stabilization program. At the same time, steps were taken to accelerate the decline in living costs by having the Government oil monopoly reduce the price of fuels, while freight, trucking and bus rates and the prices of American surplus foodstuffs were also put down. The general strike never took place.

The two industries (mining and oil) which dominate the Bolivian economy were necessarily in the forefront of the problems facing the Stabilization Council. The mining industry was in lamentable condition and its rehabilitation obviously would require a period of years. Productivity had dropped severely, not only because of the labor conditions described above, but also because machinery and equipment had not been replaced, because new prospecting and exploration had been neglected, and because working capital had dried up and new capital was unavailable. The oil industry, on the other hand, was expanding rapidly, was now meeting all domestic needs for petroleum products (except aviation gasoline) and was exporting increasing amounts to Bolivia's neighbors. However, this record of accomplishment had been based on heavy imports of equipment and supplies, which had constituted an important factor in the net dollar drain during the inflation. Since both YPFB and COMIBOL were government monopolies, both of which had arisen from the nationalization of property in which American interests had been involved (and, in the COMIBOL instance, had not yet received adequate compensation), the U.S. Government was disinclined to supply them with new capital out of Point Four funds. Is was, however, unthinkable that currency stabilization could succeed without the rehabilitation of COMIBOL and the continued development of oil production. Such a situation called for the most careful planning and execution of the national exchange budget [20]). Not only YPFB and COMIBOL, but all Government departments and agencies were required to keep their foreign exchange outlay within the limits set by this budget, and the Banco Central was charged with keeping a constant check on their compliance with the exchange budget. Government offices and agencies were prohibited from buying foreign exchange from (or selling it to) anyone

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[20]) This was all the more true because of the unorthodox strain to which the stabilization fund was subject by virtue of the fact that the Banco Central de Bolivia had almost completely exhausted its gold and dollar reserves when the stabilization program went into effect. In fact, on a net basis, its reserve position was negative.

but the Banco Central [21]). Actually, COMIBOL's net exchange receipts during 1957 were substantially below the budgeted amounts, while YPFB complained often and bitterly that the dollars allotted to it in the exchange budget were inadequate for its development program and even for the continued maintenance of existing production. This situation was partly relieved through an unbudgeted receipt of advance royalties from a foreign oil company to which a concession had been granted.

A principal effect of the stabilization was to tear away the curtain which had been concealing the true state of the Bolivian economy. So long as the note issue could be inflated and the currency unit depreciated, the economy could go on producing less than it consumed, with the production deficit simply reflected in the rate of inflation and, by and large, the nation could remain unaware of the actual seat of its difficulties. With the stabilization, for the first time, many Bolivians realized with a shock the deplorable condition of the national economy and the crying need for basic adjustments. Until the stabilization program, for example, Bolivia's textile and other manufacturing industries had for the most part been doing reasonably well, whereas now they suddenly found themselves in a slump; retail shops had previously enjoyed a „seller's market" and now were finding it hard to dispose of their plentiful stocks to customers who were short of cash; some actual unemployment had developed despite the legal requirement that staffs be kept at their full level; etc., etc. Some persons argued that the stabilization program was the cause of this sad state of affairs. Such critics tended to forget that not all of the manufacturing industries had prospered before the stabilization and that those which had, had benefitted from an unnatural situation in that they were exporting at free market rates goods which they had manufactured, in whole or in part, with materials brought in at artificially low rates; that a "seller's market" is not much of an advantage if the shelves are bare (as they had been) of goods to sell and the proceeds of sales depreciate in value from day to day; and that a certain amount of transitional unemployment was a necessity if Bolivia's economy was to be allowed to make the adjustments needed to ensure a more productive use of the national resources.

At the end of its first year, the Bolivian stabilization program had cleared many difficult hurdles and had demonstrated that eventual success was possible if the Bolivian Government and the Boli-

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[21]) The sole exception was that COMIBOL was allowed to keep 40 per cent of its exchange receipts in a special account to be used to cover its own dollar needs. This account was subject to supervision by the Banco Central.

vian people persevered in their effort and continued to enjoy for a few more years the enlightened cooperation of the U.S. Government and the International Monetary Fund. Many tough problems remain to be solved, but in the writer's opinion they are solvable and they are less tough than the problems which have already been faced and overcome. The beneficial results of stabilization are apparent in many ways. The exchange rate is stable, prices have actually declined, the note circulation is no longer soaring [22]). Bureaucratic controls, delays and confusion have diminished. Goods produced in or imported into Bolivia for local consumption now actually are available for local consumption, instead of flowing into neighboring countries and fattening the purses of speculators and smugglers. The long lines of *coleros* waiting for hours to buy a loaf of bread or some other necessity of life (either for themselves or for resale at a profit) have not been seen since December 1956. Anyone in Bolivia can now buy practically anything, including dollar exchange, with the greatest of ease. Agricultural output has increased very substantially since the farmers have no longer had to fear the competition of goods imported at an artificially low exchange rate. Concepts of efficiency and honesty are gradually returning to all sectors of the economy.

Of the problems which remain to be solved, the principal ones are:

(1) *Productivity*

This problem exists in all sectors of the Bolivian economy: mining, industry, agriculture and others. The problem has three aspects, namely, improvement of labor morale and discipline, better mechanization of output, and improved administration and organization. On the first two aspects, under the inspired leadership of a gifted President, the Government has been straining every effort to achieve results. It was the writer's definite impression when he left Bolivia that the tide had begun to turn so far as labor attitudes are concerned. Strikes had diminished greatly in number and frequency, and local labor unions had broken away from the misdirected leadership and uncooperativeness of certain labor politicians. As to mechanization, this will depend on Bolivia's ability to attract new foreign capital — a point discussed below. Better administration and organization is needed particularly in Govern-

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22) In his report to the Legislature on November 25, 1957, Finance Minister Moreno Cordova stated that the note circulation on November 16 had stood at Bs. 180.5 billion. This represents an increase of 21.3 per cent since the beginning of stabilization and of only 6.2 per cent since February 1957. During the final 12 months of the inflation, the note circulation had risen by 279.6 per cent.

ment offices and agencies, and above all in COMIBOL. Many useful recommendations which have been made along these lines by United Nations and United States technical missions over the past seven years have not yet been implemented by the Bolivian Government. As regards COMIBOL, it is urgent that the least productive mines, which at current low prices for minerals are incurring heavy losses, should be closed and their factors of production — men and equipment — transferred so far as possible to the more productive mines [23]).

(2) *Social security*

Bolivia's social security rates are still too high and should be lowered, at least temporarily, to 10 or 15 per cent for employers and 3 or 4 per cent for workers. The existing rates (30 per cent for employers, 7½ for workers) could be kept in the law as an objective for the day when Bolivia's economy will be sufficiently productive to make their realization possible without endangering the new stability of the currency.

(3) *The Banco Central*

The Banco Central de Bolivia now consists of two departments with divergent and conflicting aims, under a single management and board of direstors. These departments should be separated at the earliest possible date by converting the Monetary Department (which issues the currency) into a true central bank and the Banking Department (which deals with the general public and makes industrial and commercial loans) into a true development bank, each with its own management and board. The new Banco Central should be given greater autonomy so as to help it resist political pressures for the financing of budget deficits and special projects, and undue interference in its monetary and administrative policies. The new development bank (into which the existing Banco Agricola and Banco Minero could usefully be merged in order to effect economies of capital, management talent and staff) should play an important role in supervised credit and technical assistance to small borrowers, and in the medium and long-term financing of private enterprise and of the Government's commercial enterprises (including COMIBOL and YPFB). It should refrain from competition with the private banks in the short-term credit field.

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[23]) Statements made before the Legislature on November 25-27, 1957, by several members of the Cabinet indicate that the Bolivian Government has adopted for 1958 a practical program for raising productivity by closing marginal mines, reequipping others, transferring surplus mine and industrial laborers to other activities, etc.

(4) *Recapitalization*

All Bolivian enterprise, private and public, was bled white during the long years of inflation and needs a "blood transfusion" in the form of new capital. To attract foreign direct investments could be an important function for the new development bank, which should also be empowered to borrow from the International Bank in its own name. Even before the Siles Zuazo administration took office, a new Petroleum Code was promulgated which reopened the door for cooperation by foreign oil companies, on reasonable terms, in the development of Bolivia's oil production. A similar code to govern foreigners' investments in mining is now being prepared, and a general investment code is planned. These are all steps in the right direction. It is also desirable that a final settlement be reached as soon as possible with the former owners of the big mines; under the existing interim arrangement, Bolivia bears the burden of annual payments without getting rid of the onus of "nationalization without adequate compensation." If agreement with the creditors cannot be reached, surely some form of arbitration should be possible.

Bolivia's problem of recapitalization, and thereby its currency stabilization problem, would be immensely eased if Washington could see its way to help finance Bolivia's nationalized entreprises. The present policy is self-contradictory. On the one hand, the United States recognizes and emphasizes the need for helping Bolivia stabilize the currency, while, on the other hand, it declines all financial assistance to the two Bolivian enterprises — COMIBOL and YPFB — which constitute practically the whole Bolivian economy and on whose increased output and productivity the long-run success of the currency stabilization is dependent.

The solution of these remaining problems should dispel whatever doubts may still exist about Bolivia's ability to maintain a stable and sound currency. It will then be possible to convert the existing *de facto* stabilization into *de jure* stabilization. Only after the new stability has been consecrated by law are the substantial amounts of Bolivian private capital now held abroad likely to return to the country. It is to be hoped that technical assistance by the U.S. Government and the International Monetary Fund will remain at Bolivia's disposal through these final stages.

It is also to be hoped that Bolivia will continue along the sound road it has traveled since December 1956, and that other countries will be able to adapt to their own needs some of the ideas and principles which proved so beneficial in the Bolivian case.

LA STABILISATION DU PESO BOLIVIEN

par *M. Ernest Moore*

RÉSUMÉ

L'inflation bolivienne de 1931-1956 a été plus violente et a atteint un dégré plus haut que toute autre inflation qu'on ait connue dans l'Hémisphère Occidental. La circulation des billets s'est élevée à un niveau 5.512 fois plus haut qu'en 1931, le taux du dollar a atteint 3.768 fois celui de 1931, et l'indice du coût de la vie à La Paz est monté jusqu' à 1.664 fois le chiffre de 1931 malgré le fait qu'il ne tenait compte que sur une petite échelle des prix cotés au marché noir, plusieurs fois plus élevés que les cotations officielles.

Le cours moyen du dollar, qui était de 3,08 pesos en 1931, a atteint sur le marché libre 275 en décembre 1952, 1.850 en décembre 1954 et 11.604 en octobre 1956.

Le point de départ de cette inflation avait été la Guerre du Chaco de 1932-1935, période pendant laquelle les autorités boliviennes se sont accoutumées au contrôle des changes et aux taux de change artificiels. Après la Guerre, le financement par la Banque Centrale de grands travaux publics et de nouvelles entreprises de l'Etat a contribué au progrès de l'inflation. Pendant la Deuxième Guerre Mondiale, le rythme de l'inflation a été stimulé par l'essor des exportations, avec son effet sur les rentrées de devises et sur les revenus personnels, et par les nouveaux déficits encourus par l'Etat pour le développement et les traveaux publics.

Un certain ralentissement du rythme d'inflation après la Deuxième Guerre a cédé place à une recrudescence subite du sinistre par suite des phénomènes économiques qui ont accompagné la Révolution de 1952 — nationalisation des grandes mines, morcellement des grandes propriétés, disparition presque complète de l'ordre et de la discipline de travail. Les coûts de production ont augmenté à mesure que l' équipement se détériorait et de couteux bénéfices sociaux ont été législés. Le déclin de la production minière et agricole a été rendu plus grave par la baisse des prix de l'étain et d'autres minéraux après la guerre coréenne. Le nouveau monopole minier (COMIBOL) et l'Etat lui-même, ont été obligés de combler leurs déficits par le recours à la Banque Centrale. A partir de 1953 le Point Quatre a fourni une aide substantielle sous forme de produits alimentaires et fonds de contrepartie, mais étant donné la grave distortion du système des changes une bonne partie des

comestibles américains n'a fait que traverser la Bolivie pour s'écouler dans les pays avoisinants, tandis que le reste s'offrait en Bolivie à des prix qui décourgeaient toute concurrence des produits similaires cultivés en Bolivie même.

En 1953 le Gouvernement MNR (Movimiento Nacionalista Revolucionario) a fait une première tentative pour arrêter l'inflation et stabiliser le peso bolivien, avec l'aide technique et financière du Fonds Monétaire International. La parité légale et le cours officiel du peso ont été dépréciés de 60 à 190 au dollar et des cinq autres taux de change, un seul (le taux libre) a été conservé. Un budget annuel des changes a été institué, les opérations de change par les banques ont été prohibées sauf comme agents de la Banque Centrale, un contrôle strict des crédits bancaires a été imposé, etc. Néanmoins, le taux du change libre, qui était de 650 au dollar au début de ce programme (mai), a fini l'année à 950 et a atteint 1.820 en décembre 1954, 4.018 en décembre 1955 et 11.604 en octobre 1956. Comme le taux officiel pendant ce temps est resté à 190, toute une variété de nouveaux taux de change ont été introduits pour faire face à la situation sous une forme ou autre.

En 1956 le Gouvernement Bolivien a accepté l'offre du Gouvernement Américain d'envoyer en Bolivie une mission de trois techniciens (dont l'auteur était un) qui lui aiderait à monter un nouveau programme de stabilisation. Un Conseil National de Stabilisation Monétaire a été créé sous la présidence du Président de la République, les autres membres étant les Ministres d'Affaires Etrangères, des Mines, et d'Economie Nationale; le Vice-Président Exécutif de l'Office de Planification; le Président de la Banque Centrale; et le Directeur Executif du Conseil (ce dernier n'était autre que le Chef de la Mission Américaine, Mr. George Eder).

Le Conseil était chargé d'étudier et de recommander les mesures appropriées à prendre en tout ce qui concernait les problèmes financiers et économiques de Bolivie et il avait pleins pouvoirs pour exiger toutes les données essentielles à son travail. Aucune nouvelle émission de billets ou ouverture de crédit à l'Etait pouvait se faire sans le vote unanime du Conseil.

Le Président de Bolivie, Siles Zuazo, a obtenu de son Parlement pleins pouvoirs pour mettre en vigueur par décret le nouveau programme que le Conseil était en train d'élaborer. Une mission a été envoyée aux Etats Unis pour négocier sur une base réduite la reprise du service de la dette étrangère de Bolivie, impayée depuis 1931; pour obtenir des conditions plus libérales d'amortissement de la dette à l'Export-Import Bank; et pour négocier des crédits importants comme soutien au programme de stabilisation. Cette mis-

sion a atteint tous ses objectifs. Les crédits de stabilisation se montaient à $ 25.000.000, dont $ 7.500.000 du Fonds Monétaire, $ 10.000.000 du Point Quatre, et $ 7.500.000 de la Trésorerie Américaine.

Les premiers décrets de la stabilisation, promulgués le 15 décembre 1956, ont aboli le système de taux multiples de change, chargé la Banque Centrale de fixer un taux unique basé sur les tendances fondamentales de l'offre et la demande, rétabli la liberté complète des changes et du commerce international, aboli le contrôle des prix et les subsides, prohibé le recours direct à la Banque Centrale par les entités gouvernementales, et incorporé les budgets de ces entités les prix et le coût de la vie a été estimé et des augmentations dans le budget central de l'Etat. L'effet de ces modifications sur correspondantes et immédiates des salaires publics et privés ont été autorisées, tandis que toute augmentation ultérieure a été prohibée pour la période d'une année; cette période a été prolongée depuis d'une deuxième année.

Les recettes de l'Etat pendant la première année de stabilisation devaient être produites pour plus de 70% par des taxes sur la production minière, les importations et les exportations. Un nouveau tarif douanier a été élaboré pour augmenter les revenus douaniers. Une taxe de 3% a été imposée sur toutes les transactions en merchandises sauf certains articles spécifiés de toute necéssité. Le prix des services a été taxé à 10%. D'autres taxes ont été ajustées à la nouvelle valeur de la monnaie. Une taxe a été législée sur la revalarisation des avoirs fixes, et sur l'or et les devises des banques. Les taxes de securité sociale payables par les patrons ont été rédultes de 46% à 30%; la taxe de 7½% payables par les employés n'a pas été modifiée.

Le contrôle du crédit bancaire a été rendu plus sévère par la création d'une encaisse marginale obligatoire de 50% d'abord — 75% ensuite — contre toute augmentation des dépôts (en plus de l'encaisse ordinaire de 40% des dépôts existants), et par certaines prohibitions et limitations qualitatives (prohibition des crédits à la consommation et à la nouvelle construction, par exemple).

Le taux de change fixé au début du programme était de 7.750 au dollar. Après une appréciation à moins de 7.500, le taux s'est deprécié à plus de 8,900. Cette dépréciation a été due à la diminution de la production minière, à la chute des prix mondiaux des minéraux, et à la lutte acharnée que s'est déroulée entre les deux ailes du Parti MNR au sujet du programme de stabilisation. L'aile gauche du Parti voulait obtenir une amélioration des augmentations de salaires qui avait été concédées au début du programme. Cette lutte a été gagnée brillamment par l'aile droite du Parti sous la

commande du Président Siles Zuazo, dont la sincérité et la droiture a gagné l'admiration générale. Le taux de change s'est amélioré à 8600-8700, ou il se trouve depuis des mois.

A la fin de sa première année, le programme bolivien de stabilisation a franchi ses principaux obstacles et a démontré la possibilité du succès pourvu que le Gouvernement et le peuple de Bolivie maintiennent leur effort et continuent à jouir pendant quelques années encore de la collaboration du Gouvernement Américain et du Fonds Monétaire. Les problèmes qui restent à résoudre sont difficiles, mais ils sont moins formidables que ceux qui ont déja été résolus.

Les principales questions qui restent sont: (1) amélioration de la productivité; (2) réduction, au moins provisoire, des taxes de la securité sociale; (3) conversion de la Banque Centrale en deux institutions séparées, dont l'une une vraie banque centrale et l'autre une banque de développement; (4) récapitalisation de l'économie.

THE GREAT DEPRESSION IN AN EXPORT ECONOMY A CASE STUDY OF THE SUDAN

by Z. M. KUBINSKI
New South Wales University of Technology
Kensington (Australia)

In order to appreciate the impact of the Great Depression on the Sudan it is necessary to examine some aspects of its economic structure during the period immediately preceding the 1929/30 season.

In July of 1925 the great Gezira Scheme [1]) was completed and 80,000 acres of land planted with cotton seed were artifically irrigated by gravitation. This development marked the beginning of a new era in the economy of the Sudan and its importance was succinctly expressed by Sir Harold MacMichael as follows:

"So long as it was dependent for its revenues and well-being upon the growing of corn and pasture and such products as need no artificial irrigation ..... little harm could come to the country except from extrenous sources, whether in the guise of human aggression, locust or disease. But when the Sudan took to growing of cotton by artificial irrigation it embarked upon a new career, altered its whole scale and method of livelihood, and gave hostages to fortune. It stood or fell by the results of its cotton sales ....." [2])

Since 1925 the Sudan has been a mono-export economy, that is, an economy in which the exports — principally of one commodity — are the main generating force of the national income, while imports represent the main leakage from the income flow. [3]) This structure differs essentially from that of an „investment" economy, for example, the U.S.A. where the national income is primarily determined by investment at home, while savings represent the main leakage from the income stream.

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[1]) The Gezira Scheme was run under a triple partnership of Government, tenant-cultivators and 'Specialized Management' provided by the Sudan Plantations Syndicate Ltd. and Kassala Cotton Company Ltd. The basic shares of the partners were 40 per cent each to Government and the tenants and 20 per cent to the Companies.

[2]) The Anglo-Egyptian Sudan, Sir Harold Mac Michael, London, Faber and Faber (1934), ch. XLX, p. 224.

[3]) See Monetary Problems of an Export Economy — The Cuban Experience, 1914-1947, H. C. Wallich, Harvard University Press, Cambridge, Massachusetts (1950), chs. 1, XII and XV in particular.

Public Finance in a Developing Country — El Salvador — A Case Study, H. C. Wallich and J. H. Adler, Harvard University Press, Cambridge, Massachusetts (1951), passim.

The increase in the importance of exports of cotton since 1925 is shown in Table 1 below. Next to cotton were exports of gum arabic, also shown in this Table.

TABLE 1

VALUES OF COTTON EXPORTS (GINNED COTTON & COTTON SEED) AND GUM ARABIC EXPORTS, EXPRESSED AS PERCENTAGES OF TOTAL VALUES EXPORTED.

	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
Cotton	14.9	16.6	38.3	39.2	58.8	64.4	64.2	70.4	61.8	29.8	54.7	53.7	53.0
Gum arabic	23.0	36.4	22.0	18.9	17.5	13.2	12.0	10.3	20.0	34.1	12.0	15.0	12.9
Total	37.9	53.0	60.3	58.1	76.3	77.6	76.2	80.7	81.8	63.9	66.7	68.7	65.9
All other exports	62.1	47.0	39.7	41.9	23.7	22.4	23.8	19.3	18.2	36.1	33.3	31.3	34.1

Calculated from statistics obtained from Foreign Trade Reports, Department of Economics and Trade, Khartoum.

This unprecedented increase in the importance of cotton exports had far-reaching concequences on the economic position of the Sudan vis-a-vis the rest of the world. The Gezira and other less important cotton schemes (Gash and Tokar) bring income to the country so long as the long-staple Egyptian cotton, produced by these enterprises, commands a good price and when the yield is normal. The yield is not entirely beyond control but the price is subject to conditions which cannot be regulated by the Sudan Government. The dependence of the Sudan economy on exports implies that it is subject to imported booms and depressions commensurate with changes in the price of cotton.

Since 1926 cotton has become a very important source of revenue of the Central Government. On the one hand the Government receives an annual income — a share in the profits — from the Gezira and other cotton undertakings and from the export duty on cotton; on the other hand, various sources of revenue, such as direct taxation (Business Profits Tax), indirect taxation (Import Duties, Royalties and profits of the Sugar Monopoly) and receipts from Sudan Railways and Posts and Telegraphs are determined by the level of national income and the volume of trade which, in turn, closely depends on the exports of cotton. It is evident, therefore, that the revenue from cotton, whether direct or indirect, is the most important single factor in the maintenance of budgetary equilibrium.

The important extensions in production of cotton in the country thus created a new set of internal and external economic relations which, perhaps, may be referred to as a *fragile cotton system* [4]). This fragility was dramatized by the events of the early thirties; indeed, the years of the Great Depression are most illustrative of the new strategic forces operating in the Sudan economy.

However, in the Sudan economy there are certain redeeming features which mitigate the severity of depressions imported from abroad. It appears that a sizable part of the national income is derived from agricultural pursuits only loosely connected with the market economy, as a result of which a large section of the population is relatively self-sufficient in most basic needs [5]). Moreover, the imports into the Sudan which consist primarily of manufactures, raw materials and fuel are, during a period of depression, capable of contraction without undue hardship to the country. The Sudan economy is on the whole less vulnerable to world-wide depressions than export economies, with small subsistence sectors and a high content of essential foodstuffs in imports ordinarily tend to be. A depression in world markets reduces the country's standard of living close to subsistence level, but it does not result in mass unemployment [6]) and starvation [7]).

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[4]) The expression "fragile economy" was used by Messrs. D. Seers and C. R. Ross with reference to the cotton economy of the Gold Coast in their Report on Financial and Physical Problems of Development in the Gold Coast, July 1952, Office of the Government Stalislician, Accra. ch. 1.

[5]) "Raincrop production is by far the most important division of the Sudan's agricultural economy. Irrigated agriculture, devoted essentially to the production of cash crops, the most valuable, in monetary terms, of which is cotton, tends to obscure this fact because it dominates the export trade of the country and makes the biggest single contribution to the budget of the Government. The fact remains, however, that about half the population of the Sudan are engaged in subsistence agriculture in the rain belt, and that about eighty per cent of the crops produced in the Sudan in any one year are rain grown". The Origin and Development of the Labour Movement in the Sudan (Dr.) Saad El Din Fawzi, Ph. D. thesis, University of London (June 1955). p.p. 7 and 8.

[6]) The industrial employment during the Great Depression appears to represent a very small percentage of the total population. Owing to a lack of adequate statistics, no definite figure can be given for this percentage. It was estimated by Dr. Saad El Din Fawzi (op. cit.) that, in 1953, the labour employed in workshop and industrial establishments amounted to 24,831 (Ibid., p. 31 Table 111). If the employment by the Government (45,000) in the Gezira (29,000) and the Railways (25,000), is added to the above figure, then the total employment of labour is some 124,000. According to the recent census of population the estimated total population of this country is about ten million. The total employment of labour thus represents only 1,24 per cent of the above figure.

[7]) What may appear to the Western eye as a very low standard of living, to the native of the Sudan it is not so. "Were one to adopt money as the

The opening of the Gezira Scheme coincided with high prices and high yields of cotton. In the first season the net profit per acre amounted to an impressive figure of £ 30. The yield and the price of cotton in subsequent seasons were also favourable, although signs of deterioration became evident as the 1929/30 season approached. Statistics of yield and price of cotton, and net total value of crop for the period 1925/26 to 1936/37 are given below:

TABLE 2

THE GEZIRA SCHEME

(1) Gross average price per lb. of lint realized at Liverpool (pence).
(2) Average yield of unginned cotton per feddan in Kantars.
(3) Net total value of crop (£E. .000).
(4) Index of (3) — 1928/29 = 100.0.

Season	(1)	(2)	(3)	(4)
1925/26	18.07	4.799	2,329	71.5
1926/27	18.20	4.746	3,344	102.7
1927/28	19.84	3.336	2,551	78.4
1928/29	18.54	3.565	3,254	100.0
1929/30	7.98	2.329	884	27.1
1930/31	6.39	1.353	392	12.0
1931/32	8.43	4.138	2,264	69.5
1932/33	8.02	1.920	873	26.8
1933/34	8.56	2.331	1,025	31.5
1934/35	8.23	4.442	2,188	67.2
1935/36	8.69	3.722	2,069	63.6
1936/37	8.94	4.474	2,964	91.1

1 feddan = 1.038 acres.
1 kantar = 311.85 lbs.

Source: Sudan Government Budget Notes, 1940, Appendix 10
Select Comittee of the Legislative Assembly on the Future Administrations of the Gezira Scheme, Khartoum, 1950.

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yardstick and to use Western standards the conclusion would be that the entire rural population is miserably poor. Such a conclusion would, however, be wide of the mark. The people ..... are as compared to many people of Europe, extremely well off: for the poorest people there is peace, security and sunshine; there is an ample food supply and a great varity of food, milk and good water and fuel are available to all; homes are plentiful and in a good state of repair; cotton for cloting materials can be grown and spun and woven. There is, in fact, no shortage of anything that is vital for the material comfort of a household. It might, perhaps, be said that in many arts of the Sudan satisfactory physical and material basis for civilization has been achieved...".

Agriculture in the Sudan. J. D. Tothill (Editor), Oxford University Press,

The impact of the Great Depression on the Sudan was felt through a substantial fall in prices of primary products, in particular cotton [8]). By sheer caprice of fortune the general fall in prices of exports which began by the end of 1929 was accompanied by adverse climatic conditions [9]).

The rains in 1929 were the heaviest on record since 1906. In the Gezira the average rainfall in that season was 28.3 inches, being almost twice as high as the average during the period 1921/29. The rain flooded large areas under young cotton crop and the period of very cold weather which followed the rainy season spelt disaster to the crop in the form of serious infections known as 'blackarm' and 'leaf-curl' [10]). Moreover, in the same season, large quantities of grain on rainlands were exposed to the ravages of the largest-ever invasion of hair-chested locust [11]), resulting in considerable damage [12]).

The yield in the Gezira in that season was desperately low, being only 2.33 kantars per feddan, compared with 4.49 in 1925.

The price of cotton in the 1929/30 season was 8.0 d, while in the previous season it had been 18.6 d. In 1928/29 the net value of crop in the Gezira was £E. 3.2 million; the following season it slumped to £E. 884,000 (see Table 2).

The effect of the depression on the foreign trade of the Sudan is shown in Table 3 below:

London (1954), ch. 1. p. 1. The above quotation refers to a study of housing, food and living conditions in the Darfur and Northern Provinces.

Approximately one-third of the population of the country are Nilotic tribes of the Southern Sudan who lead a selfsufficient economic existence.

[8]) An important exeption was the price of gum-arabic. Below are shown prices of Gum Hashab (c.i.f.) per kantar in Great Britain for the relevant period.

Year	1929	1930	1931	1932	1933	1934	1935	1936	1937
£ E.	2.130	2.460	2.820	1.330	1.315	1.290	1.705	1.705	1.880

(Some Aspect of Gum Arabic Production, Harvie, C.H., Government Statistician, Khartoum, p. 17, Table X). It is seen that the prices of this export were high until 1931.

[9]) Report on Finances, Administration and Conditions of the Sudan (to be referred from now on as "Report on Finances") by Governor-General (H.M.S.O., London), 1930, ch. 1, p. 9.

[10]) Crops of the Sudan, C. H. Bacon in Agriculture of the Sudan (op.cit.), p. 338. Report on the Finances, 1929, ch. IV, par. 64.

[11]) The season 1929/30 was the first of five consecutive "locust" seasons Locust in the Sudan, R. C. Maxwell-Darling, in the Agriculture of the Sudan (op.cit.), ch. XVIII, pp. 404 ff.

[12]) The total cost of anti-locust campaign in 1929 was estimated at £E. 65,000 (Report on Finances, 1929, ch. IV, par. 80).

TABLE 3

VALUES OF IMPORTS (c.i.f.) AND EXPORTS (f.o.b.)[1] AND TOTAL FOREIGN TRADE
(£E. ,000)

Year	Imports	1929 = 100.0	Exports	1929 = 100.0	Total (Exports & Imports)	1929 = 100.0
1925	5,437	79.3	5,168	61.2	10,605	69.3
1926	5,574	81.3	6,435	76.2	12,009	78.5
1927	6,155	89.7	6,483	76.7	12,638	82.6
1928	6,463	94.2	7,374	87.3	13,837	90.4
1929	6,856	100.0	8,443	100.0	15,299	100.0
1930	6,177	90.1	6,505	77.0	12,684	82.9
1931	3,761	54.9	2,498	29.5	6,259	40.9
1932	3,054	44.5	5,160	61.1	8,214	53.7
1933	3,161	46.1	3,578	42.3	6,739	44.0
1934	3,945	56.5	5,105	60.4	9,050	59.1
1935	5,370	78.3	6,202	73.4	11,572	75.6

Source: Foreign Trade Reports, Department of Economics & Trade, Khartoum.

[1]) The figures for values of exports are adjusted. The official sources of statistics give mere custom valuations for exports. These are short of true f.o.b. values by quay dues, handling charges payable at the place of export, export duties and merchants' profits. Dr. G. A. D. Marzouk (The Sudan's Balance of Payments, 1938—1953, Ph. D. thesis, London University 1955) estimated that this under-valuation was about 24 per cent of the recorded values (Ibid, ch. 111, pp. 29 ff).

Table 4 below is a statement of some important sources of revenue of the Central Government, total revenue, total expenditure, surplus and deficits for the period 1926 to 1936.

The effect on the National Income of the dramatic fall in exports during the years of depression cannot be studied satisfactorily because no statistics of the National Income exist for this period. But statistics of native consumption of some commodities are available. These refer to consumption of sugar[13]), coffee, tea, spices and cotton piece-goods. Movements in consumption of these items, shown in Table '5 below, broadly indicate changes in the level of national income during the period 1926-1938. The index of the Tenants' share in the net proceeds from cotton, also given in this Table, shows movements in the income of Gezira Tenants.

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[13]) Sugar consumption in the Sudan has long been recognised as a reliable index of the economic prosperity of the people. See, inter alia, Central Economic Board Report, Sudan Government, 1921, p. 246; The Annual Report of the Sudan Government Customs Department, 1934, Sugar Control, p. 2; Ibid., 1937, Sugar Control, p. 6; Report on Finances, 1930, p. 187.

A STATEMENT OF THE CENTRAL GOVERNMENT'S REVENUE AND EXPENDITURE

(£E. ,000 — rounded figures)

	1926	1927	1928	1929	1930 [5]	1931	1932	1933	1934	1935	1936
Direct Taxation [1]	468	459	528	448	477	348	331	309	271	287	299
Indirect Taxation:											
Customs	555	579	669	729	663	455	385	390	491	607	693
Sugar [2]	401	350	350	350	499	520	422	439	504	605	681
Cotton	703	721	814	1,118	669	611	225	369	383	534	874
Railways & Steamers [3]	401	428	398	402	506	361	511	447	605	541	498
Posts & Telegraphs	142	146	164	173	184	134	112	102	112	145	139
Other Revenue [4]	1,471	1,494	1,757	1,725	1,695	1,124	1,667	1,576	1,408	1,379	1,278
Totel Revenue	4,143	4,177	4,680	4,835	4,693	3,553	3,653	3,630	3,774	4,098	4,462
Total Expenditure	3,768	3,798	4,078	4,464	4,693	4,398	3,853	3,621	3,749	3,993	4,205
Surplus	375	379	602	371	—			9	25	105	257
Deficit						166 [6]	200 [6]				
Total Revenue 1929 = 100.0	85.7	86.4	96.8	100.0	97.1	73.5	75.5	75.1	78.0	84.7	92.3
Total Expenditure 1929 = 100.0	84.4	85.1	91.3	100.0	105.1	98.5	86.3	81.1	83.9	89.5	94.1

Source: Sudan Government Accounts.
Sudan Government Budget Notes.
Sudan Government, Deputy Financial Secretary, Statistical Information, 1925—50 (Ministery of Finance, Khartoum).
Sudan Government, Financial and Trade Statistics, 1926—1944 (Finance Department, Khartoum).

[1]) Business Profits Tax, Ushur Tax, Poll Tax, Tribute, House Tax, Land Tax, Date Tax, and Animal Tax.
[2]) Profits of Sugar Monopoly. Since 1919 the imports and distribution of sugar have been controlled by the Government.
[3]) Net Contribution to the revenue of the Central Government.
[4]) Includes the revenue from General Governmental Agencies, Egyptian Government's contributions, contribution from Local Authorities, Interest, Rent, Royalities, Rates, Licences, Fees and other minor sources of revenue.
[5]) In 1930 the revenue was exactly equal to expenditure (Report on Finances, 1930, ch. IV, p. 23).
[6]) Transfers from the General Reserve Account.

TABLE 5

NATIVE CONSUMPTION AND THE INCOME OF GEZIRA TENANTS FROM COTTON.

(1) Cotton piece-goods.
(2) Sugar.
(3) Coffee.
(4) Tea.
(5) Total consumption of cotton piece-goods, sugar, coffee, tea and spices.
(6) Tenants' Share in net Cotton Proceeds [1]).

(£E. ,000)

	(1)	(2)	(3)	(4)	(5)	(5) 1929 = 100.0	(6)	(6) 1929 = 100.0
1926	751	492	241	218	1,720	74.4	936	71.6
1927	798	395	211	161	1,581	68.2	1,342	102.6
1928	947	535	181	253	1,935	83.5	1,025	78.4
1929	1,200	612	274	207	2,316	100.0	1,307	100.0
1930	950	559	276	151	1,948	84.1	354	27.1
1931	532	401	132	127	1,203	51.9	157	12.0
1932	590	179	165	78	1,023	44.1	908	69.4
1933	664	204	189	76	1,144	49.3	350	26.7
1934	775	226	222	194	1,432	61.8	410	31.4
1935	889	326	249	179	1,669	72.1	875	66.9
1936	848	383	224	235	1,707	73.7	831	63.5
1937	964	570	208	339	2,103	90.8	1,163	88.9
1938	1,071	635	206	255	2,185	94.3	836	63.9

[1]) The Tenants' share is shown before deducting advances.

Source: (1)—(5) Annual Report of Department of Economics and Trade, 1938, Appendix 1.

(6) Select Committee of the Legislative Assembly on the Future Administration of the Gezira Scheme, 1950 Appendix 5.

The most striking feature of the critical economic position which obtained in 1930 was the obvious failure of the Gezira to pay its way. This great enterprise, to the success of which the prosperity of the country was so closely bound, became a liability. It is interesting to quote a statement of the Financial Secretary [14]) illustrating the shaken confidence in the financial soundness of the Gezira:

"..... we shall have to regard the Gezira Scheme as on the whole a liability to be liquidated by annual subsidies not only from the indirect receipts attributable to the scheme but also from the normal administrative revenues of the Government. Time alone will show

[14]) Mr. H. E. Fass, an expert of the British Treasury, who was invited to the Sudan in the summer of 1930 to take charge of the situation.

whether this possibility is to be realised but in the meantime our finances must be regulated on this pessimistic hypothesis, which means that revenue derived, either directly or indirectly, from the cotton enterprise, must be treated as highly speculative." [15])

It was estimated that the Sudan Government would have to subsidise the Scheme to the amount of some £E. 600,000 [16]), [17]) a year (at 1930 prices).

This onerous liability had to be discharged in very unfavourable financial circumstances. Until the thirties the Sudan economy enjoyed substantial inflows of capital from abroad, in the form of the direct Egyptian subsidy [18]), expenditure in connection with the Egyptian Army in the country or on account of such developments as, for example, the Gezira Scheme and Railways. "It has indeed always been a source of astonishment to those visiting the Sudan how this Government has been able to raise the revenues appearing in its Budget ....." [19]). But since 1930 the Sudan Government has had to raise its revenue "from a country naturally unproductive in itself and deprived ..... of much of its apparent taxable capacity in the past ....." [20]).

In an estimate of the future revenue from cotton after the disastrous season of 1929/30 it was calculated that a return of £E. 8 per feddan could be expected (in 1929/30 it was £E. 5) [21]) — this would just balance the cost of the Gezira Scheme [22]) and so the Scheme would not be a burden to the country [23]). It will be recalled [24]) that the actual return per feddan in the Gezira was £E. 30 in the 1926/27 season (£E. 28.5 in 1925/26), hence the estimated return of £E. 8 in the 1929/30 season gives a good idea of the extent of the break-down of economic conditions at the beginning of the Great Depression. However, even this conservative estimate proved to be grossly optimistic. The nadir of the depression

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15) Sudan Government Budget Notes, 1931, p. 1, par. 3. See also Reports on Finances, 1930, ch. 1, p. 8, par. 5.

16) Suden Government Budget Note 1931, p. 2, par. 6.

17) This figure was subsequently estimated at £E. 700,000 - £E. 900,000 (Retrenchment Committee Report, 1930, p. 1).

18) An annual contribution of £E. 750,000 was made by Egypt for military purposes in the Sudan; this contribution was accepted, not in the terms in which it was made, but in aid of general Administration.

19) Retrenchments Committee Report, 1931, p. 2.

20) Ibid.

21) Report on Finances, 1930, p. 10, par. 10.

22) The annual expenditure in the Gezira Irrigation Scheme was nearly £E. 1 m, much of it interest and Sinking Fund on external loans.

23) Sudan Government Budget Note, 1931, pp. 1 & 2.

24) Page 4 of this Study.

came in 1931 when the price of cotton slumped to 6.4 d; the yield was the lowest on record, viz. 1.35 kantars [25]) and the return per feddan £E. 1.7 [26]). The prices of other primary products also fell to an unremunerative level with the exception of the price of gum arabic [27]). As a result the value of exports in that year fell by about 40 per cent below that of the previous year, with a consequent heavy fall in the Government's revenue.

The Sudan Government was then confronted with the task of saving the financial position of the country.

In the early stages of implimenting the anti-depression policy the orthodox doctrine of balancing the budget appears to have been the primary goal [28]). Hence, one of two lines of policy could be adopted: either to increase the drastically reduced revenue so that it would balance the existing expenditure, or to reduce expenditure to the low level of revenue.

It will be appreciated that there was little the Government could do in order to control the revenue since this primarily depended on the entirely uncontrollable factor of the price of cotton, to a lesser extent on prices of other primary products, and partly controllable yield of cotton. Attemps were made to improve the yield in the Gezira by introduction of a new system of rotation, the use of a new seed imported from Egypt and by intensification of agricultural research [29]). The Government obviously could not control the climatic factors of rain and temperature which, in the 1929/30 season, were largely responsible for the low yield of cotton.

When the revenue from indirect taxation (import and export duties and sugar) fell with the coming of the depression, there was very little scope in compensating for this by increasing direct taxation, for the income of the people was seriously reduced and it was admitted that "any hope in obtaining increased revenue by further (direct) taxation would be deceptive" [30]). In fact, a certain measure of relief, amounting to £E. 40,000 [31]), was given in the form of reduced assessment of Herd Tax, Poll Tax and Tribute Tax [32]).

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[25]) At the time fears were expressed that the Gezira soil was progressively deteriorating and, therefore, giving annually decreasing yields. (Reports on Finances, 1931, ch. 12, pp. 10 & 11).

[26]) Report on Finances, 1931, p. 10, par. 10.

[27]) See footnote 8 p. 5 of this study.

[28]) Reports on Finances, 1931, ch. 1, par. 2.

[29]) Report on the Finances, 1930, ch. 1, p. 9.

[30]) Sudan Government Budget Note, 1932, pp. 14 & 15.

[31]) Ibid. Other benefits conferred were a reduction in the price of sugar and abolition of royalties on wood-fuel and charcoal.

[32]) Report on Finances, 1929, ch. IV, par. 84. Ibid., 1932, ch. IV, par. 92.

It should be pointed out that the revenue from direct taxation represented a small proportion of the total revenue from taxation accruing to the Government [33]). Attempts to increase the revenue from indirect taxation were also avoided throughout the years of depression. Late in 1930 increased rates [34]) of indirect taxation actually reduced the total revenue from the sources concerned. The official attitude regarding this aspect of the anti-depression policy was clearly stated as follows:

"..... there is little or no reserve of taxable capacity in the country ..... any attempt to raise the level of taxation would damage rather than advance our chances of recovery and retard our efforts to stimulate interest in the possible fields of profit within the country to which we must look for further progress to security" [35]).

It is clear that the structure of the revenue was inflexible and did not permit of adjustments to the new situation which emerged at the beginning of the depression.

It is not surprising, therefore, that the attention of the Treasury was focussed on the expenditure side of the budget and that desperate attempts were made to reduce the expenditure to the meagre flow of revenue. However, before the various retrenchments (discussed anon) became operative, the immediate task was to fill the gap between current revenue and current expenditure.

It was estimated that at the beginning of the Great Depression the deficit was more than £E. 1 m [36]). This was financed by the sale of securities, a reduction in the cash balances and an overdraft with the Bank of England covered by the deposit of a part of the remaining assets [37]). A statement of the Central Government assets, Liabilities and reserves is shown in Table 6 below:

On the eve of the depression the financial position of the Government was strong as the net liquid assets amounted to £E. 2.5 m. This favourable position was mainly due to budget surpluses obtained during the period of prosperity 1925-1929. These surpluses are

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33) In 1929 and 1930 revenue from direct taxation on natives represented 9.2 and 10.1 per cent, respectively of the total revenue.

34) The basic rate of custom duties was raised from 8 to 10 per cent. Other increases were in specific rates on tobacco and alcohol and in railway rates on transport of confectionery, tea and cigarettes. Report on Finances, 1931, ch. IV, p. 89.

35) Sudan Government Budget Notes, 1933, p. 36.

36) Report of the Retrenchment Sub-Committee of Council, 1932, (instituted under Minute 6 of the 361st Meeting of het Governor-General's Council held on the 28th November, 1931), p. 1.

37) Ibid.

TABLE 6

STATEMENT OF THE CENTRAL GOVERNMENT ASSETS, LIBIALITIES AND COMMITTMENTS AND RESERVES.

(£E. ,000 — rounded figures)

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937
Assets												
Cash	713	494	464	495	471	118	756	1,009	695	1,105	1,180	1,118
Investments	2,015	3,269	3,551	3,466	2,470	1,900	1,689	1,883	2,842	3,641	5,096	7,308
Other [a])												
Total	4,028	4,939	5,155	5,276	4,090	2,794	2,998	3,378	4,063	5,406	7,034	9,448
Current Liabilities & Commitments [b])												
Total	1,469	1,788	1,958	1,801	1,310	525	355	471	546	582	688	928
Reserves of net Liquid Assets												
General Reserve Account	1,661	1,547	1,272	1,011	319	144	169	179	364	434	578	1,009
Cotton Equalisation Account	—	470	479	486	384	—	—	145	514	1,045	1,750	3,034
Other Reserves [c])	896	1,143	1,439	1,814	2,077	2,125	2,524	2,583	2,639	3,345	4,018	4,477
Total Reserves	2,559	3,151	3,197	3,475	2,780	2,269	2,643	2,907	3,517	4,824	6,346	8,520

Source: Sudan Government Budget Notes.
Notes on Accounts, Sudan Government.
Financial & Trade Statistics, 1926—1944, Ministry of Finance, Khartoum.

Assets = Liabilities and Commitments plus Reserves.

a) Sundry Debtors, Stores and Miscellaneous.
b) Sundry Creditors, Unexpended Balances of Allotments from Reserves to General Reserve Account, Railways Capital Account, Railways Renewals Account, Loan Commitments Account and Miscellaneous.
c) Railways Capital Account, Railways Renewals Account, Revolving Credits Reserves, Pensions Accounts, Provident Fund Accounts and Miscellaneous Accounts.

shown in Table 4 (in 1925 the surplus was £E. 491,213). All surpluses during the period of prosperity amounted to an impressive figure of £E. 2.2 m. Providently, they were used to build up reserves of which the most important was the General Reserve Account. In the process of financing deficits in 1931 and 1932, the sums of, respectively, £E. 166,821 and £E. 200,004, were drawn from the General Reserve Account [38]); other drafts made from the Cotton Equalisation Account completely exhausted this account in 1931 and 1932 (see Table 6).

The rapid rate of depletion of the reserves caused understandable anxiety [39]). In 1933 the only liquid assets, after the depletion of the previous two years consisted, apart from the cash required for day-to-day financial operations of the Sudan Government, of about a million and a quarter of British Government Securities. This position, in the opinion of the Financial Secretary, was 'extremely insecure' [40]).

A proportion of reserves were ear-marked as provisions for various liabilities of the Government. The principal obligations, payable in cash, were to the Sudan Plantations Syndicate and the Kassala Cotton Company, to the Sudan Light and Power Company, for the services of the Sudan Debt and the Pension Scheme. It was estimated in 1933 by the Financial Secretary that these future liabilities amounted to £E. 2 m. while in that year the Government set aside for this purpose only £E. 160,000 [41]).

There was at the time a serious danger that the Sudan Government might have to call upon His Majesty's Treasury to implement the British Government guarantee of Sudan Loans and to help otherwise [42]).

The policy of drawning on reserves was a short-term emergency measure which could not be repeated, and it was clear that drastic economies in expenditure were necessary to stop the disturbing depletion of these reserves. A special Retrenchment Committee was set up early in 1931 to enquire into the possibilities of obtaining savings additional to such as could be secured by normal means.

The attention of the Committee in their search for retrenchments was primarily focussed on the expenditure on personnel. This was

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38) This account was kept in order to stabilise the annual amount credited to the Budget from the profits of the Gezira Enterprise (Report on Finances, 1931, ch. IV, par. 81).

39) Sudan Government Budget Notes, 1932, p. 3. Ibid. 1931, pp. 97 ff.

40) Ibid. 1933, p. 38.

41) Ibid. 1933, p. 39.

42) Retrenchment Committee Report, 1931, p. 9.

very high in the pre-depression years and it could not be maintained at this level after the slump of 1930. It was felt that a comprehensive review of establishments, pay, grading and allowances was necessary with a view to economies and control.

The principle which guided the recommendations of the Committee concerning retrenchments of British personnel was that while „the quality of the British Staff in this country must be as high as possible" [43]) the numbers should be reduced to as low a figure as possible. This approach was largely based on Sir George Schuster's Memorandum [44]).

The policy regarding the number of Sudanese employees of the Government was different from that applied to British Officials, namely, this employment was but slightly reduced comparatively to reductions in numbers of other nationalities. The Table below gives the relevant statistics.

TABLE 7

CLASSIFIED APPOINTMENTS

	British [1])	Sudanese	Egyptians	Syrians	Others	Total
On 31.12.30 . . .	1,037	2,837	1,332	220	136	5,502
On 31.12.32 . . .	804	2,813	799	92	48	4,556
Total reduction . .	233	24	533	128	88	1,006
Total reduction as percentage of 1930 figure	22.4	00.8	40.0	58.2	64.7	18.1

Source: Sudan Government Budget Note, 1933, p. 22.

[1]) In addition the strength of the British Officers in the Sudan Defence Force was reduced from 152 to 91 (Report on Finances, 1931, ch. 1, par. 19).

The Retrenchment Committee made recommendations for promotion of Sudanese Officials and by the end of 1933, 220 Sudanese had been appointed to classified posts which had previously been held by foreigners [45]). A conspicuous result of these retrenchments was thus a mild measure of Sudanisation of the Government's posts.

The next measure recommended by the Committee with a view

[43]) Retrenchment Committee Report (1931), p. 173.

[44]) Governor-General's Dispatch, No. L.5 of 27.10.11927 (Addressed to the High Commissioner) reprinted in the Retrenchment Committee Report (1931).

[45]) Report on Finances, 1932, ch. 1, par. 6.

to economies were abatements of pay of Government Officials. During a study of this problem interesting facts came to light. It was found that the salaries paid to Sudanese officials in various Government Departments were high relatively to those of comparable jobs in the United Kingdom [46]). In particular, a Memorandum written by Mr. Urben [47]) gave evidence on "extraordinarily high rates of pay made to the Sudanese Post and Telegraph Staff as compared with the wages of British Staff employed in the Home Post and Telegraph Service performing similar work" [48]). This study of pay took into account such relative circumstances as the degree of intelligence of the two groups; the standard of education, the value of output produced, the responsibility, the nature of work performed, hours of work, etc.

The general impression of the Committee was that the rates of pay of Sudanese officials were not economical. Various reasons were given in this connection but the most important were the following [49]):

1. For a given expenditure on personnel more people could be employed at lower rates;

2. Government, being the largest employer in the country, set the level of salaries and, at the then prevailing rates, the Commercial firms were reluctant to employ Sudanese;

3. The discrepancy between the existing rates of pay of the Central Government employees and those of Native Administration militated against the further development of the latter [50]).

The Committee recommended that "the Sudanese rates of pay should be brought down as near as possible to their economics rates" [51]).

Regarding the pay of British officials, it was recommended that this should not be subject to any reductions [52]).

Recommendations regarding abatements of pay made by the Young-Clarke-Depuis Committee were, however, rejected by the members of the Retrenchments Sub-Committee of the Council

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46) Retrenchment Committee Report 1931, p. 226.

47) Retrenchment Committee Report, 1931, Appendix 4, Memorandum by Mr. Urben, Controller, Post & Telegraphs Service.

48) Ibid. p. 223.

49) Retrenchment Committee Report, 1931, p. 183.

50) Native Administration was established in the Sudan in 1924. It rapidly developed and in 1931 it was an important administrative system (See Reports on Finances, 1931, ch. 1, pars. 20ff).

51) Retrenchments Committee Report 1931, p. 183.

52) Retrenchment Committee Report, 1931, p. 174.

appointed in November 1931 [53]), and this Committee recommended that "... the wisest course of action lay in ... acceptance of the principle that there should be no differentiation, in the matter of abatements of pay, between nationalities ..." [54]). The rates of abatements of pay finally agreed upon [55]) were as follow [56]):

Salary	Abatement in Percentage
Less than £E. 60 per annum	5
£E. 60 but less than £E. 1,750	7½
£E. 1,750 or more	10

The Governor-General's salary, at his own request, was reduced by 20 per cent [57]).

Apart from the economies discussed hitherto, [58]), [59]) further restrictions on expenditure on general services of Departments and Provinces were applied. The procedure adopted was to invite Governors and Heads of Departments to submit to the Committee their proposals for retrenchments which were then subject to scrutiny. Care was taken that these restrictions would not result in lowering of the standard of services involved.

The policy of retrenchments brought substantial savings on expenditure. In 1931 the net savings on expenditure, as a result of recommendations of the Retrenchment Committee of that year, amounted to £E. 378,000; in 1932 abatements of pay resulted in a

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53) Report of the Retrenchment Sub-Committee of the Council, 1932 (Constituted under Minute 6 of the 351st Meeting of the Governor-General's Council held on the 28th November, 1931).

54) Ibid, p. 5.

55) Approved by the Governor-General's Council on December, 1932.

56) Ibid. p. 7.

57) Ibid.

58) In addition to the Retrenchment Committee of 1931 and the Retrenchment Sub-Committee of the Council, two minor Committees were set up in 1932 to enquire into the possibilities of economies by a simplification and reduction of stores and a reorganisation of Government Workshop in Khartoum. Following the recommendations of these Committees, stocks were reduced by £E. 336,800 and the direct economies resulting from a reorganisation of the Government Workshop in Khartoum were estimated at £E. 5,000 (Sudan Government Budget Note 1933, pp. 24 & 25).

59) Possibilities of economies on leave facilities were also discussed but in view of the fact that medical opinion was unanimous as to the necessity of annual leave, only very lenient retrenchments were recommended (Retrenchment Committee Report, 1931, pp. 199 ff). The resulting economies were accordingly negligible. Allowances which constituted a part of recognised emoluments were either reduced or entirely abolished (Report on Finances, 1931, ch. 1, par. 19).

saving of £E. 120,000 and of £E. 720,693 [60]) on restrictions on Departmental and Province services. It was estimated that the reduction on expenditure between 1930 and 1933 was some £E. 1,180,000 [61]).

The drastic retrenchments, in particular on outlays on capital and renewals, caused concern. The Financial Secretary was disturbed by the damaging effects on the development of the country of these and other retrenchments on expenditure during the years of depression [62]). It was, however, imperative to give precedence to savings in order to avoid the exhaustion of reserves with the inevitable subsequent default of obligations.

The year 1934 seems to be the first year of a mild recovery [63]). In that year the export position improved owing to abnormal exports of dura (Sorghum millet) to Egypt where crops had failed [64]), but the Gezira crop was poor. For the first time since 1931 it was possible in 1934 to budget for the 1935 expenditure without resorting to the expedient of an over-all cut [65]).

One of the principal features of the 1935 budget was the provision of, approximately, £E. 70,000 in respect of the partial restoration of salary abatements and increased provision for the financing of the arrears of renewals and of certain remunerative projects from which a relatively high revenue was expected to accrue in the future [66]). Immediate prospects were encouraging — the Gezira, which had enjoyed one good crop in the previous five years (1931/32 season when the largest and finest crop ever of 800.000 kantars was produced) promised to give a satisfactory crop.

Indeed, the year 1935 marks definite recovery [67]). The improvement in exports, primarily due to large exports of cotton, was remarkable and increases in revenue of the Central Government particularly from customs, sugar and cotton, provided evidence of progress. In that year also reserves were strengthened. However,

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60) Based on estimates prepared by Governors and Heads of Departments submitted to the Finance Department (Retrenchment Sub-Committee of the Council, 1932, p. 12A).

61) Sir H. MacMichael, op. cit., p. 231. Another estimate of this figure is £E. 1,614,000 (Sudan Government Budget Note, 1933, p. 22). This figure represents 25 per cent of the estimated expenditure without retrenchments.

62) Sudan Government Budget Note, 1933, Part III, Summary and conclusions.

63) Report on Finances, 1944, chs. IV and V, passim.

64) Ibid.

65) Sudan Government Budget Note, 1934, p. 7.

66) Sudan Government Budget Note, 1935, p. 13.

67) Reports on Finances, 1935, chs. 1 & IV, passim.

it was realised that this was not the end of hardships; that a further and substantial strengthening of liquid reserves was needed for the Government to be able to withstand a prolonged economic depression without undue hardship to the people and dislocation of Administration [68]). But at the same time the task of building up the depleted reserves became less formidable than in the past years. It is of interest to note that an improvement in the export position was associated with strengthening of financial reserves. This obviously follows from the dependence of Government revenue on the exports, and it was stressed by the Financial Secretary that:

"A vital consideration is the extent to which the Government is financially interested in the cotton trade. Any reduction of price or of yield, or any retardation of sales is immediately reflected in the cash position and the maintenance of adequate liquid balances is therefore essential for the day-to-day financing of the Government's varied transactions" [69]).

The satisfactory development of the budgetary position in 1935 made it possible to vote important supplementary credits for extensions of irrigation in the Gezira Scheme, for ginning installations in the Nuba Mountains area, for the re-organisation and expansion of the agricultural research service and for the final restoration of salary abatements [70]).

An interesting development directly resulting from the depression experiences of the Government was an agreement with the Concession Companies regarding the financial position of the tenants of the Gezira Scheme. A Tenants' Equalisation Fund was instituted for the protection of the interests of the tenants during years of low income from cotton. In view of violent fluctuations in income to which any cotton enterprise is susceptible, it was evident that an account similar to that of the Government's own Cotton Equalisation Account, was equally essential for the protection of thousands of tenants upon whose contentment and endeavour the success of this great irrigation scheme must always depend.

The Gezira became a particular concern of the Government. It was clear during the 'Great Depression that it represents not only the Government's largest investment but also its most difficult financial problem.

During 1936 the progress of the Sudan along the road to economic recovery was steadily maintained [71]). In that year the improved

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[68]) Sudan Government Budget Note, 1935, p. 12.
[69]) Sudan Government Budget Note, 1935, p, 12.
[70]) Reports on Finances, 1944, ch. IV, par. 59.
[71]) Report on Finances, 1936 chs. I and IV, passim.

trend in commodity prices was accompanied by a marked increase in the volume of foreign trade and the beneficial effect of this general recovery on the Government finances was clearly evident. This year marks the end of a six year struggle of the country for financial solvency.

The impact of the Great Depression on the Sudan economy was severe. When the nadir of the depression was reached in 1931 the indixes of exports, imports, consumption and revenue were very low relatively to the pre-depression figures.

This study reveals a considerable degree of sensitiveness of the economy to changes in exports. Movements in exports, imports, consumption and revenue displayed a high degree of association [72]).

The anti-depression policy consisted of financing the deficit between the falling revenue and the expenditure by draws on reserves. Soon is was realised that this policy could not be further implimented because the reserves were rapidly depleting. Hence the policy of retrenchments on expenditure was implimented. This was based on reductions in the number of posts in the Administration, abatements of salaries and general economies on expenditure of Departments and Provinces.

The curtailment of expenditure which must have aggravated the already depressed economic conditions is subject to criticism. In the Sudan the national income depends predominantly on exports and the expenditure of the Government. If there is a fall in exports the national income can be maintained only through heavier expenditure. However, a fall in exports means a fall in revenue and, unless there are reserves available on which to draw in order to close the gap between the dwindling revenue and pre-depression level of expenditure or in order to increase the expenditure to compensate for the reduction in exports, this expenditure must be reduced.

In an appraisal of the anti-depression policy in the Sudan it is necessary to bear in mind that the revenue structure of the Central Government depended on the uncontrollable factor of the price of cotton; that the revenue was not easily adjustable to rapidly deteriorating conditions; that the reserves, after the early years of the depression were dangerously low and that the Sudan Government was deprived of normal compensatory measures which are readily available in an "investment" economy.

It is seen from this study that during the period of prosperity, that is, from 1925 to 1929, the Government accumulated reserves which, during the years of depression were run down in order to

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72) See Statistical Appendix to this study.

finance the gap between the depressed revenue and the minimum expenditure that had to be maintained to avoid a breakdown of Administration. It appears, therefore, that the orthodox policy of balancing the budget annually was apparent rather than real because the budget was balanced over the period of prosperity and depression, in other words, cyclically.

APPENDIX

In order to estimate the degree of dependence of total values of exports on the price and yield of cotton a multiple correlation analysis was used.

By using historical series of values of exports, prices and yields of cotton, the coefficients b and c of the following equation are the required statistical estimates of the sensitivity of values of exports to changes in the price and the yield of cotton respectively.

$$\text{Log } (X) = b \log (P) + c \log (Y) + a$$

The multiple regression equation estimated for the period 1925-1953 yielded the following result:

$$(1) \quad \text{Log } X = .849797 \log P + .107535 \log Y - .005371 \text{ [1]}$$

This relationship is interesting because it attempts to explain the total values exported in terms of changes in two factors of which one, that is the price of cotton, is entirely beyond the control of the Government. Although cotton yield is to some limited extent controllable it is seen that the importance if this factor comparatively to the price of cotton is low.

Another simple regression equation was estimated for the relationship between total values of exports and total values of imports. The period studied was 1925-1953 and the resulting equation is given below:

$$(2) \quad \text{Log } M_n = 1.002004 \log X_{\frac{(n-1) + (n-2)}{2}} + .002356 \text{ [2]}$$

where M stands for total values of imports and X for total values of exports. It is seen that the regression coefficient of imports on exports is high and that the imports 'lagged' behind exports. This is as expected.

In the Sudan the main factor influencing the level of income is exports and the level of income, in its turn, influences imports. The sensitiveness of imports to changes in income is fairly high because of the absence of substitutes to imports on the home market.

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1) Multiple correlation coefficient = .925
Simple correlation coefficient between X and P = .921; X and Y = .346
2) Simple correlation coefficient between M and X = .959.

The crucial relationship from the standpoint of the public finance is that between the total revenue of the Central Government and the exports and imports. A multiple correlation estimated for the period 1925-1953 was as follows:

$$(3)\ \text{Log } R_n = .676271 \log \frac{X_{n + (n-1)}}{2} + .197344 \log M_n - .028020^{3})$$

where R stands for total Government revenue.

It is seen that the regression coefficient of R on X is fairly high and that the change in the revenue in a given year is best explained by an average of exports in that year and in the year preceding it. The low regression coefficient of R on M is due to high degree of relationship between exports and imports as shown in equation (2). This is a well known case of multicollinearity [4]).

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[3]) Multiple correlation coefficient = .939
Simple correlation coefficient between R and X = .936; R and M = .965.
[4]) Time trend was eliminated from all series.
Correlations are not of first differences.
All correlation coefficients are at least significant (R. A. Fisher's "Tables of Significant Values for r, R, and t" in his "Statistical Methods for Research Workers).

LA GRANDE DÉPRESSION DANS UNE ÉCONOMIE EXPORTATRICE

par M. le Professeur Z. M. Kubinski

RÉSUMÉ

Dans cet article l'auteur discute l'effet de la Grande Dépression sur l'économie du Soudan, surtout par rapport à la politique fiscale antidépression.

Par suite du développement important de la production du coton dans la période de 1925 à 1930 le Soudan devint en 1930 environ un pays à économie de mono-exportation, c.à.d. un seul produit dominait dans les exportations: le coton. Ces exportations constituaient la source principale du revenu national, les importations formant la fuite principale du courant entrant dans le pays. La production du pays comprenait, outre le coton, quelques produits alimentaires servant à la consommation de la population. Pratiquement tous les produits fabriqués, les matières premières et quelques produits alimentaires étaient importés de l'étranger.

Le coton formait une source importante de revenu pour le Gouvernement Central — ces revenus provenaient principalement de l'entreprise cotonnière gouvernementale — le fameux Schéma Gezira. En outre, le revenu provenant de droits d'entrée et de sortie et de taxation générale dépendait également dans une large mesure des quantités de coton exportées.

Au moment du commencement de la dépression peu après 1930, les prix de coton baissèrent. Par conséquent le niveau du revenu national, des importations et du revenu gouvernemental tomba considérablement. La situation devint plus grave encore par suite de conditions climatologiques défavorables. C'est qu'une invasion sans précédent de sauterelles détruisit une grande partie des vivres et que des pluies particulièrement fortes influencèrent défavorablement le rendement du coton.

Le résultat immédiat de la dépression fut un déficit important dans les finances du gouvernement. On a tâché de combler ce déficit en puisant dans les réserves disponibles, qui avaient été formées pendant les années de prospérité précédant la Grande Dépression. Cependant, ces réserves ne tardaient pas à être épuisées et le gouvernement dut procéder à la politique d'économies dans les dépenses afin de les adapter aux revenus diminués.

Cette politique d'économie dans les dépenses prit la forme d'une

réduction du nombre d'employés engagés au service du gouvernement, de réductions de salaires et d'économies générales dans les activités de départements gouvernementaux.

De cette façon on réalisa des économiés de dépenses considérables, mais on n'ignorait pas que les réductions rigoureuses des dépenses, surtout des dépenses en immobilisations et en renouvellements, avaient une influence défavorable sur le développement du pays. Cependant, il s'imposait d'économiser avant tout, afin d'éviter que les réserves ne soient épuisées et que l'on ne puisse pas faire face à ses obligations.

En 1934 il y eut les premiers signes d'un redressement. Dans cette année l'exportation présenta une amélioration et l'année suivante l'état des finances permit la restauration partielle des salaires diminués et des dispositions modestes quant au financement des immobilisations et des renouvellements. En 1935 l'économie s'était redressée totalement de la Grande Depression.

Cette étude a démontré que l'économie du Soudan est très sensible à des changements dans l'exportation. Il existe une corrélation étroite entre les fluctuations dans l'exportation, l'importation, la consommation et le revenu de Gouvernement Central (quelques-unes de ces relations ont été exposées dans l'Annexe de l'article en question).

On arrive à la conclusion intéressante que la politique orthodoxe d'équiliber le budget était apparente plutôt que réelle, parce que le budget a été équilibré d'une façon cyclique, c.à.d. sur la période de prospérité et de dépression. Ainsi, pendant la période de prospérité précédant la Grande Dépression, le gouvernement a formé des réserves qui, pendant les années de dépression, ont été épuisées afin de combler la lacune entre le revenu réduit et les dépenses minima qu'il fallait faire pour éviter un écroulement de l'administration.

La réduction des dépenses, qui doit avoir aggravé les conditions économiques déjà languissantes, peut être sujette à des critiques. Quand les exportations diminuèrent, le revenu national n'aurait pu être maintenu qu'au moyen de dépenses accrues du gouvernement. Cependant, la diminution des exportations avait une influence défavorable sur le revenu du gouvernement et, par conséquent, sur ses dépenses. Les réserves disponibles furent vite épuisées pour financer le déficit et au moment où celles-ci furent devenus dangereusement faibles, il était nécessaire de réduire les dépenses.

COOPERATION ECONOMIQUE EUROPEENNE

par UGO PAPI

Recteur de l'Université de Rome

1. *Reprise de l'activité des échanges, à longue et à plus brève échéance.*

La réalisation de ce but: produire des quantités plus grandes de biens et de services - - et on sait que des centaines de millions d'hommes sous-alimentés ont besoin de quantités de produits toujours plus grandes — est subordonnée à la facilité des échanges entre pays. Ainsi pourrait-on remédier à la situation paradoxale qui s'est créée au milieu de notre siècle: surplus d'un côté, pénurie énorme de l'autre. Car l'échange doit être le complément de toute impulsion donnée aux productions „sélectives".

Même si ce n'est qu'en vue de produire davantage un *seul* bien — blé, riz, textiles — un pays peut se trouver dans la nécessité d'importer des graines, semences, engrais, machines, de la laine, du coton: donc d'avoir recours à d'autres pays et de payer, avec ses propres biens, les marchandises importées. Le phénomène de la production est intimement lié au phénomène de l'échange. Et l'objectif d'élever le niveau de vie de la population ne peut être tenté, que si l'on parvient à réaliser effectivement une collaboration intense et efficace entre tous les pays désireux de produire davantage et de bénéficier des revenus des autres, moyennant l'exportation de leurs propres biens.

Or, l'élément fondamental de l'intensification des échanges entre tous les pays du monde c'est l'investissement de capitaux en devises fortes dans le relèvement des régions arriérées. Jusqu'ici seulement des capitaux d'Etat — et non des capitaux privés — ont essayé de s'appliquer à certaines productions séléctives et à l'exécution de grands travaux publics, susceptibles d'être utiles à un grand nombre d'entreprises privées: travaux d'irrigation, de construction de routes, ports, centrales éléctriques, tous susceptibles de créer des „économies externes".

De tels investissements augmentent en effet, les disponibilités en produits sur le marché à relever élèvent le niveau de vie des populations intéressées augmentent le pouvoir d'achat des producteurs de denrées agricoles et de matières premières, tant sur le marché intérieur que sur le marché international; en effet les producteurs peuvent exporter leurs propres marchandises sur d'autres marchés, lorsqu'il y a demande; ou bien ils peuvent profiter des devises fortes

affluant dans le pays, lors des investissements de capitaux, pour acheter toutes sortes de biens sur d'autres marchés.

Il s'en suit que les investissements de capitaux finissent par agir comme de puissants „accélérateurs" des échanges. Cette intensification amène logiquement à la conclusion l'activité de certaines organisations internationales: laquelle commence par l' „assistance technique" aux pays sous-développés, continue par l'incitation à l'afflux de capitaux en devises fortes vers des productions sélectives et des travaux publics et aboutit à une intensification des échanges internationaux.

Toutefois, il s'agit là de phénomènes qui ne sont réalisables qu'à échéances relativement *longues*. Pour le moment, ce qui presse c'est la nécessité d'échanges plus intenses entre pays car chacun d'eux, par la vente de ses biens propres, doit se procurer les biens nécessaires à ses propres besoins. Sous l'urgence de cette nécessité on essaye d'intensifier les échanges par *étapes régionales*.

2. *L'étape régionale.*

Si tous les pays du monde pouvaient facilement se mettre d'accord pour supprimer les obstacles existant actuellement, l' „étape régionale" serait sans doute superflue. Malheureusement, les expériences de l'après guerre nous prouvent abondamment combien il est difficile d'atteindre ne serait-ce même qu'un embryon d'accord entre divers pays. La vie de l'OECE, en ce qui concerne les „restrictions quantitatives", la vie du GATT en ce qui concerne les droits de douane, en sont la preuve évidente. On est donc porté à considérer comme *plus facile* la collaboration entre pays, dont les économies présentent des différences moins considérables plus immédiate se réalise par l'élimination, d'un commun accord, des diverses catégories d'obstacles aux échanges entre pays.

Quel est le fondement économique de l'étape régionale? C'est l'augmentation du pouvoir d'achat des revenus déjà existants. Au fur et à mesure que les droits de douane baissent et que s'assouplissent les contingents et les autres restrictions quantitatives, les coûts de production et les prix des produits d'importation baissent, eux aussi, et permettent au pouvoir d'achat aux mains des titulaires de revenus de s'accroître. On essaye de créer toute une série d'économies externes aux entreprises de production. A la suite de ces économies vont s'accroître la demande régionale de nombreux produits et services et l'offre régionale: car en présence d'une demande accrue, les producteurs eux mêmes se trouveront poussés à produire davantage.

A la condition que l'activité de production se place *sur une base de concurrence* à l'intérieur de chaque pays et entre pays de la

région — l'offre plus large de produits et de services sera obtenue à des coûts et à des prix de plus en plus bas. Il y a intérêt pour chaque producteur à avoir recours aux perfectionnements techniques pour vaincre la concurrence des producteurs de son propre pays et de ceux des autres pays. Chaque producteur a tout intérêt à créer différentes économies internes à l'entre-prise. Les deux séries d'économies — les „externes" dues à la diminution des obstacles aux échanges et les „internes" dues à l'application de tous les perfectionnementes techniques en mesure d'aider dans la lutte de la concurrence se traduisent en „évenement favorable" à la reprise économique. Car, enfin, elles impliquent l'augmentation du pouvoir d'achat des revenus dans chaque pays, demande accrue, offre plus large et, dans les limites de l'accroissement effectif du pouvoir d'achat, emploi plus large et durable des facteurs de production, y compris le travail. Voila ce qu'on doit entendre par fondement économique de l'étape régionale.

L'efficacité de l'étape régionale — il faut être clair la-dessus — dépend entièrement de la volonté de maintenir en vigueur un principe de concurrence. Seulement ce principe peut permettre à la région, dont les pays désirent s'allier, une *capacité croissante de compétition* avec les autres régions et continents. Et cette capacité, sera conquise graduellement par la région à condition qu'elle consente à abaisser également le tarif extérieur vers les pays tiers. Ainsi conçues les „étapes régionales" — aujourd'hui une partie de l'Europe, demain un ensemble des pays d'autres continents — représentent des pas *décisifs* vers une entente économique entre tous les pays du monde pour produire davantage, produire à des coûts plus bas et intensifier les échanges entre pays.

3. *L'étape régionale n'implique pas du tout nécessairement dirigisme, fermeture d'un bloc de pays aux contacts avec les autres, discrimination en vers les pays tiers.*

Si nous en arrivons à une définition rigoureuse du fondement économique de l'approche régionale, il est facile d'éliminer toute une série de soupçons, de craintes, de malentendus. Par exemple, que le Marché Commun signifie *dirigisme;* par exemple, que le Marché Commun signifie *fermeture d'un bloc des pays* à tous les autres; par exemple que le Marché Commun signifie *discrimination* à l'encontre de tous les autres pays.

En réalité, l'approche régionale ne signifie pas *dirigisme* si — au fur et à mesure que baissent les obstacles aux échanges — l'offre est laissée, par chaque gouvernement responsable et par la coopération des six gouvernements, aux entrepreneurs les plus capables.

L'approche régionale ne constitue pas un bloc *fermé* de pays,

tant que la concurrence peut s'affirmer à l'intérieur de la région et imposer à chaque pays de perfectionner sa production et de s'ouvrir aux échanges avec d'autres pays. Dans le marché mondial nous retrouvons ce qui se passe dans le marché d'un pays quelconque. Dans chaque pays il y a des entreprises qui offrent un produit — soit le blé — à des coûts très différents. Pareillement sur le marché mondial il peut y avoir des régions qui offrent le blé à des coûts différents: cela ne crée pas de dangers pour d'autres continents.

Si les Etats Unis d'Amérique pouvaient, à eux seuls, satisfaire tant les besoins du marché intérieur que les besoins mondiaux en blé, on pourrait espérer une offre de blé au prix de revient le plus bas possible. Malheureusement les Etats Unis ne soit pas en mesure de faire face, par leur offre propre, soit aux besoins du marché intérieur, soit aux besoins du marché mondial. Alors, il est nécessaire que d'autres régions, ou d'autres continents, produisent le blé — même à un prix de revient plus élevé — pour les besoins intérieurs et éventuellement pour les besoins d'autres pays. Et si certains pays se mettent d'accord pour produire du blé et d'autres produits, cet accord n'implique pas qu'on va constituer un bloc de pays privilégiés.

Evidemment, au moins pendant une période de transition, les pays qui participent à l'approche régionale pour produire du blé se trouvent forcés de *maintenir* certaines mesures de protection.

Pourquoi? Si nous prenons, par exemple, l'agriculture européenne — au moins pour certains produits — elle ne semble pas en mesure de résister à la concurrence des grands pays exportateurs. Même abstraction faite de la diversité des coûts et des prix entre pays d'outre-mer et pays de l'Europe, l'agriculture des pays européens se heurte à la concurrence des prix mondiaux, maintenus artificiellement bas au moyens de primes et d'autres formes d'encouragement à l'exportation. Il serait peu prudent d'abandonner tout à coup la protection et de laisser l'Europe subir l'influence de ces phénomènes, surtout dans la période où tous ses efforts devraient converger à rendre l'offre des produits agricoles la plus économique possible: en d'autres termes, à porter la plupart des entreprises agricoles au niveau de coûts de celles qui travaillent avec une plus grande efficacité. En même temps, si l'on considère l'importance, en Europe, de la population qui vit de l'agriculture — faute d'émigration, faute de développement industriel adéquat — il semble indispensable d'assurer à la main d'oeuvre agricole une activité satisfaisante. Pour cela — tout en preparant le projet de réduire les mesures de protection, selon la diminution graduelle des coûts de production — l'Europe doit tendre à les garder pour une certaine période. Mais

cette conduite ne signifie pas du tout que l'Europe par l'intégration des économies de certains pays doive se fermer encore plus aux autres. La protection se justifie pour les industries nouvelles. A plus forte raison, devrait — elle trouver sa justification pendant la période transitoire, qui tend à concentrer tous les efforts pour réduire les coûts de production et les prix.

Il est certain que le maintien d'une protection qui va diminuant ne signifie pas du tout vouloir constituer un bloc de pays fermé aux contacts avec les autres.

L'approche régionale ne pourrait pas même être considérée comme *discriminatoire* au détriment des autres pays. Si pour permettre un élargissement de la demande et ensuite un élargissement de l'offre régionale à des coûts et à des prix plus bas, il faut avoir recours — d'une façon implicite ou explicite — à une „priorité d'achat" dans les pays participants avant les autres pays, cette priorité n'est qu'un expédient transitoire. Lorsque l'action de la concurrence est assurée dans la région, lorsque — à la suite de la réduction progressive des droits de douane et de l'élargissement des contingents — le demande régionale augmente et laisse aussi augmenter l'offre à des coûts plus réduits sous l'action de la concurrence cette offre devient l'*offre la plus économique* possible dans le sens seulement où les producteurs les plus efficaces restent sur le marché. Une fois ce resultat obtenu, la priorité d'achat peut disparaître. Elle était nécessaire tant que persistaient les obstacles aux échanges. Les obstacles disparus, la priorité d'achat peut elle-même disparaître: car au moins en partie, les producteurs les plus économiques sont en mesure de faire face eux-mêmes à la concurrence des pays tiers.

Dernière remarque. Même pendant la période de transition la priorité d'achat ne porte pas nécessairement atteinte aux courants d'importations traditionnels des pays tiers. Le fait qu'on envisage une économie *en expansion* ne rend pas nécessairement, toujours possible aux pays participants d'exercer la „priorité d'achat" dans la région, et de continuer les importations traditionnelles des pays tiers.

En résumé, l'étape régionale est indispensable pour remonter graduellement une situation très complexe de protectionnisme et pour préparer des solutions, qui — partielles seulement au point de vue géographique — préparent des solutions qui tendent à la solution du problème mondial. Une entente économique entre tous les pays du monde ne pourrait aujourd'hui être conçue, que sur des objectifs d'un caractère extrêmement vague. Les „étapes régionales" — axées sur l'action de la concurrence à l'intérieur du territoire qui recherche l'intégration économique — préparent une

convergence d'apports régionaux. On ne saurait jamais les concevoir comme des coalitions à cloisons étanches, sans les voir amenées fatalement à se combattre.

4. *Difficultés de l'intégration des économies de différents pays. L'exemple de l'Europe.*

Tout ceci dit quant à la nécessité de l'approche régionale, il faut reconnaître que plusieurs difficultés s'opposent à la réalisation d'une intégration économique. Dans le cas de l'Europe:

a) — une *première* difficulté est due à la répugnance qu'éprouvent les Etats à renoncer, sous n'importe quelle forme, à leur souveraineté nationale, pour tout ce qui, directement ou indirectement, concerne l'économie du pays et, en particulier, les directives de politique monétaire et financière.

b) — Une *seconde* difficulté vient du fait que la Grande-Bretagne trouve des inconvénients à s'unir à l'Europe, craignant de compromettre ses intérêts impériaux. D'autre part, elle se montre peu favorable à une Europe unifiée sans sa propre participation. On pourrait, sur ce point, paraphraser la poète latin: „nec mecum, nec sine me."

c) — Une *troisième*, du fait que les différentes économies européennes *ne sont pas complémentaires* les unes des autres. Cependant il s'agit d'une difficulté en très grande partie apparente. A l'occasion des études en vue de l'union économique entre l'Italie et la France on a pu constater que l'union est avantageuse même entre pays dont les économies sont en concurrence entre elles. Lorsqu'il n'y a pas de grosses différences entre les six prix de revient de différents pays, la spécialisation des fabrications dans les différentes branches de l'industrie peut permettre de tourner cette difficulté sans grand dommage pour les pays contractants.

d) — Une *quatrième* difficulté est représentée par la *conscience, ou la compréhension insuffisante des buts* que peut s'imposer une organisation économique. L'intégration européenne ne pourra pas résoudre le problème des importations, c'est-à-dire, des achats indispensables en matières premières et en produits alimentaires. L'intégration ne pourra pas *non plus* résoudre le problème de l'écoulement de certaines disponibilité exportables. A quoi bon l'organiser?

e) — Une *cinquième* dépend de la complexité des structures économiques des différents pays. L'intégration de pays à „économie complexe" — c'est-à-dire ayant une activité à la fois agricole, industrielle et commerciale, — présente des difficultés. On ne saurait donc invoquer, comme un précédent, ni l'initiative des treize pays — premier noyau des Etats Unis d'Amérique: pays à très faible population, producteurs de matières premières destinées en grande

partie à la consommation locale et peu susceptibles d'être supplantées par des marchandises produits en d'autres régions de l'Union Economique en voie de constitution — ni d'autre part, l'initiative des pays allemands qui, dans la première moitié du XIXme-siècle, entrèrent dans le „Zollverein" qui devint par la suite, au point de vue politique, l'Empire Allemand. L'unification ne se heurtait pas à des oppositions résolues, car elle n'impliquait pas de profondes modifications de structure. Tout au plus, compromettait-elle une future possibilité de développement autonome des différents pays en assurant un développement à la direction politique de l'Union. Par contre la situation actuelle des nations européennes est tout à fait différente.

f) — Une *sixième* difficulté consiste en ce que, à partir de 1930, le processus *d'internationalisation* et *d'unification* des directives de chaque pays a été remplacé par un processus de *diversification* et de *désintégration* de l'économie internationale. En d'autres termes, la diversité d'orientation économique des différents pays n'a fait que s'accentuer: les pouvoirs publics ayant dû intervenir, de plus en plus souvent, dans les questions de politique monétaire, sociale, financière, économique, à cause de problèmes particuliers à résoudre, dans une profonde disparité de conditions. Tenir compte de ces diversités de directives et les *coordonner* est un problème, dont on ne peut nier l'importance.

Cet ensemble de difficultés ne devrait pas être négligé par tous ceux qui désirent prendre en considération toutes les conséquences que comporte un processus d'intégration économique, afin de ne pas être contraints de les aborder après coup.

5. *Préjudices qu'une intégration européenne peut comporter.*

Le processus d'intégration une fois en route les inconvénients ci-après pourraient se vérifier:

1) *abandon* de certaines activités productrices qui, dans un cadre bien plus vaste, n'auraient plus de raisons d'être;

2) *restriction* d'autres activités qui pourraient devenir pléthoriques sur un marché plus vaste;

3) *déplacement,* plus ou moins considérable, de main-d'oeuvre de l'une à l'autre région comme conséquence des nouvelles possibilités d'emploi;

4) *défaut d'utilisation* des capitaux investis dans les activités qui doivent être abandonnées ou limitées, de même que dans l'outillage et l'aménagement des régions qui se vident, ou dont les perspectives de développement ne sont plus les mêmes (maisons d'habitation, magasins, services de transport, services publics);

5) plus grand *besoin de capitaux:* a) pour monter de nouvelles

installations; b) pour l'*agrandissement* de celles existantes dans les localités les plus propices; c) pour la préparation des travaux publics et des services, préparation qui exige le développement d'activités économiques et de population, dans les localités favorisées par les plus grandes surfaces intégrées;

6) *diminution,* même temporaire, de la *production générale* par suite de déplacement et d'hésitations, pendant une longue période de temps;

7) possibilités de *chômage.* Dans le cas où, par suite de dispositions inhérentes à l'intégration économique, un chômage grave et persistant menacerait de se déclencher dans l'un des pays de l'Union — la nécessité s'impose aux pouvoirs publics de prevoir les plans nécessaires à l'élimination d'une telle menace.

6. *Des avantages résultant d'une intégration économique.*

Comme contre-partie — en reprenant ce que nous avons appelé les bénéfices de l'étape régionale — nous pouvons indiquer deux sources principales d'avantages pour l'ensemble des pays contractants;

a) les *avantages* déjà mentionnés d'un *marché plus vaste,* au fur et à mesure que diminuent les „restrictions quantitatives" et les droits de douane et que s'élargissent la demande et par conséquent, l'offre régionale à des coûts de plus en plus réduits;

b) les *avantages* résultant de la *rationalisation* de l'activité productrice dans chaque pays, sous l'action de la concurrence. La rationalisation s'accompagne de l'adoption de tous les perfectionnements productifs économiquement valables.

En ce qui concerne la *première* catégorie d'avantages, ils sont dus à un marché plus *ample* et plus *accessible* aux produits qui peuvent être obtenus plus abondamment et à des prix de plus en plus réduits, si la concurrence reste active entre les producteurs de chaque pays et dans le pays même. Tout ceci permet d'augmenter la consommation de biens obtenus en plus grandes quantités surtout dans le territoire intégré, d'élever le standard de vie des populations des pays participants, de préciser à quelles activités de production chaque pays peut se consacrer de préférence parce que plus profitables pour l'exportation, c'est à dire plus typiquement *complémentaires* de celles du pays qui reçoit les biens exportés. C'est par le nombre de ces sortes de productions et par l'intensité du mouvement d'affaires que s'établit entre les différents pays le degré de complémentarité de leurs économies.

Quant à la *seconde* catégorie d'avantages — ceux qui résultent de la rationalisation de la production — ils sont dus au fait que, dans un territoire plus vaste, les facteurs de production peuvent se

déplacer vers des combinaisons plus économiques, c'est-à-dire vers les combinaisons où le coût de production est plus réduit. *Rationaliser* la production dans le territoire intéressé est une tâche de l'accomplissement de laquelle on peut beaucup attendre. La rationalisation concerne les activités productrices *concurrentes,* c'est à dire celles qui se disputent le placement d'un produit donné sur le marché de chaque pays. Elle va de l'*effort* que l'entrepreneur de chaque pays accomplit pour réduire son prix de revient et battre ses concurrents jusqu'aux ententes — certainement plus commodes — en vue d'éviter que persistent des productions à des coûts différents, alors qu'il est possible de n'en développer, par exemple, qu'une seule à des coûts plus bas et dans des locatités plus favorables aux combinaisons de facteurs disponibles sur le territoire intégré —— jusqu'aux *spécialisations* de production. Spécialisations non seulement de *qualité* mais aussi de *temps,* comme il en est de certains produits, par exemple fruits et légumes. Spécialisations qui transforment en productions *partiellement complémentaires* des productions auparavant concurrentes.

Pour compléter ce tableau, ajoutons que les intérêts *condamnés* par l' intégration économique sont seulement ceux des productions concurrentes; que cet inconvénient a comme contrepartie le bénéfice des *ententes* destinées à améliorer, dans les mêmes productions, les combinaisons des facteurs de production; que le sacrifice de certaines entreprises et la perte de certains investissements en des productions concurrentes constituent, évidemment, un préjudice temporaire. Par contre, au fur et à mesure que se réalisent les buts assignés à un processus d'intégration — marché plus vaste, productions plus économiques — les *avantages* présentent un caractère *durable.* Décidément, à longue échéance, le bilan est actif.

7. Intégration par décision politique ou à la suite d'études.

Ce tableau d'inconvénients et d'avantages peut être dressé soit que l'on envisage une intégration entre *tous* les secteurs économiques de certains pays — par ex., six pays — soit que l'on envisage une intégration entre *certains secteurs* de l'économie à l'exclusion d'autres — par ex., à l'exclusion du secteur agricole entre *douze* pays — soit que l'on considère l'intégration d'*un seul secteur* — par exemple, celui de l'agriculture — entre dix-sept pays. Dans l'intégration à six pays — à la condition que l'on évite soigneusement toute conception autarcique en d'autres termes que l'on ne tolère pas de diminutions considérables d'échanges avec les pays extra-européens — les avantages et les inconvénients semblent pouvoir se compenser plus facilement, parce que les économies respectives désirent s'unir dans le domaine économique tout entier.

Toutefois même si l'on admet une intégration par *secteur* — à la condition qu'elle soit poursuivie et poussée jusqu'aux dernières conséquences — elle finit par lier l'économie tout entière de chaque pays à celle des autres. Ce qui fait qu'en dernière analyse — malgré qu'il semble à première vue illogique de procéder à des approches par secteurs — il n'y a pas de différences essentielles entre approche par secteurs et approche par tous les secteurs en même temps. Les premiers doivent nécessairement évoluer vers l'approche intégrale. Parfois les approches par secteurs présentent l'avantage d'aborder dès le début les plus grosses difficultés, en commençant par les secteurs les plus difficiles, pour passer ensuite aux plus faciles: exactement l'inverse de ce qui se passe le plus souvent.

8. *Gradation dans le processus d'intégration régionale.*

Par rapport aux buts que peut s'assigner une intégration régionale, soit qu'il s'agisse d'intégration de tous les secteurs, soit qu'il s'agisse d'intégration pour un seul secteur, deux méthodes attirent l'attention des économistes et des gouvernants.

La prémière consiste en des directives de caractère politique: *simples, catégoriques,* qui décident l'intégration et laissent aux pays le soin d'y adapter leurs propres économies; advienne que pourra.

L'autre méthode comporte l'étude minutieuse: a) des situations existant dans chaque pays; b) des mutations à prévoir, conséquentes à l'intégration; c) de mesures à prendre pour parer aux pertes et mieux distribuer les avantages. Cette méthode n'exclut pas qu'a un moment donné ne puisse intervenir la décision politique. Seulement elle permet à la décision politique d'être prise en connaissance de cause et sans improvisation. C'est pourquoi elle semble préférable à la méthode de la décision simpliste. Le Marché Commun est un exemple de combinaison — un peu trop à la hâte — des deux méthodes.

9. *Coordination des politiques de consommation.*

Si l'on adopte la méthode de l'étude préalable — qu'il s'agisse d'intégration totale à six, qu'il s'agisse d'intégration par secteur à dix-sept — on ne saurait sortir tout à coup de la situation actuelle. Il faut s'orienter en conformité de certains principes. Une fois fixés les buts d'une intégration régionale lorsqu'on essaye d'employer des méthodes propres à les traduire en pratique il faut que chaque pays emploie ces méthodes selon des principes adoptés d'un commun accord. Les pays doivent tomber d'accord avant tout sur la nécessité de favoriser l'organisation et l'intégration des économies européennes. Il faut d'un commun accord coordonner les mesures concernant la consommation, la production, les échanges de produits agricoles.

Des données actuelles sur la consommation européenne de produits alimentaires permettent de connaître la demande potentielle de fruits, légumes, lait, fromages, viande: un peu moins en ce qui concerne le sucre et les corps gras. Il s'agit de productions qui répondent le mieux aux conditions des pays européens et qui doivent être favorisées en vue d'améliorer l'alimentation des populations et de mieux stabiliser les prix.

La consommation peut se développer, d'un côté, par l'adoption de tous moyens visant à accroître le revenu des classes sociales les plus pauvres. En première ligne, exportation de produits typiques; ceci équivaut à faire appel aux revenus des autres pays, revenus qui, en achetant de nos biens, finissent par s'ajouter à notre revenu.

La consommation peut, d'un autre côté, se développer par tous les moyens qui tendent à accroître la capacité d'achat des revenus existant dans le pays. Par exemple, diminution du coût du produit en raison de l'augmentation de la productivité, au moyen de combinaisons meilleures des facteurs de production; moindre prix des éléments principaux du coût de production; engrais, machines, combustibles; moindre coût du circuit de distribution; coordination des politiques de „stockage" en vue d'éliminer les fluctuations saisonnières; moindre charge fiscale. Et encore: standardisation des types, respect des appellations d'origine, larges services d'information sur la production et les marchés.

Dans un ample rayon international, un ensemble de mesures de ce genre, à la fois mesurées et coordonnées, prises en commun par les pays d'Europe, ne peut qu'influer favorablement sur la diminution des prix et sur la capacité d'achat des revenus existants, sans compromettre les intérêts des producteurs.

10. *Coordination des politiques de production.*

Il ne s'agit pas là de fixer des objectifs de quantité — „targets" — pour chaque pays. Il s'agit de réaliser l'objectif d'une plus grande productivité des combinaisons des facteurs de production, en vue d'accroître le revenu des populations agricoles, si souvent insuffisant. Il s'agit de tenir compte de tout un ensemble d'éléments — tels, par exemple, que les conditions de sol et de climat; les conditions de diffusion et de développement des connaissances techniques — pour la mise en route des productions correspondant mieux soit à la structure de chaque pays, soit aux moyens d'éducation et à ceux de la vulgarisation scientifique et des recherches; les tendances de la consommation européenne; l'importance des facteurs disponibles dans chaque pays — parmi lesquels celui de la main d'oeuvre — afin d'atteindre au maximum leur utilisation. Il s'agit de considérer la possibilité de mettre en valeur des régions

peu développées; la possibilité — avérée préalablement dans chaque pays — de remplacer certaines cultures et de contribuer à une meilleure distribution géographique de certaines productions; la possibilité d'accorder du crédit aux agriculteurs sous les formes les plus diverses; la possibilité de réaliser des placements afin d'appliquer pratiquement une coordination rationnelle de l'orientation de la production.

11. *La „cross examination" point de départ de la coordination des politiques de consommation et de production.*

Comment en pratique se déroule l'essai de coordonner les politiques de consommation et de production des différents Pays? On commence par demander à chaque Pays un rapport aussi complèt que possible sur toutes les mesures adoptées en matière de consommation et de production. La recherche des motifs qui ont donné lieu à un ensemble tellement compliqué de mesures les plus diverses est intéressante. Mais comme l'exposé par écrit de chaque Gouvernement ne parait pas toujours clair, d'un commun accord, les Pays nomment deux d'entre eux pour examiner les déclarations d'un troisième. Bien entendu, à la „cross examination" participent non seulement les trois Pays désignés officiellement — deux pour examiner et un pour être examiné — mais aussi tous les Pays participant à l'OECE. Les débats sont très longs, mais souvent ils parviennent à des résultats bien supérieurs à ce qu'on en attendait. Et si par la suite on peut remarquer, entre les politiques suivies par les divers Pays, des points de concordance et des points de divergence on dispose d'éléments pour permettre de les harmoniser dans les limites du possible et de jeter les bases d'une commune politique à venir.

12. *Coordination des politiques commerciales. Abolition des obstacles aux échanges.*

La „cross examination" offre aussi un point de départ pour essayer l'intensification des échanges entre Pays de la région, au moyen de l'abolition graduelle des obstacles qui s'opposent aux courants d'importation et d'exportation.

On a pu constater jusqu'à quel point chaque Gouvernement avait réglementé les échanges sur le marché intérieur et avec les autres Pays par des tarifs douaniers, restrictions quantitatives les plus diverses, primes, subventions, monopoles d'achat et de vente, commerce d'état, licences d'importations. Bien sûr, on le savait déjà, mais pas avec la netteté des exposés, parfois impressionnants.

Nous pouvons adopter deux hypothèses de travail:

a. en vue d'aboutir à une intégration économique à six pour tous les secteurs, ou à dix sept pour quelques secteurs, on commence par supprimer toutes les restrictions quantitatives, c'est-à-dire par „libérer" les économies des différents pays;
b. les droits de douane demeurent dans la mesure actuelle, ou dans une limite non supérieure à 10-15% afin de jouer le rôle de „mécanisme compensateur" des différences entre les prix de revient des différents pays: prix de revient comprenant les charges fiscales, la prévoyance sociale, les excès de main d'oeuvre.

C'est le système de l'OECE. La suppression des droits de douane ne pourrait être envisagée que lorsque, d'une part, par suite de perfertionnements de la production, la productivité par habitant et par capital augmenterait — toujours en ce qui concerne l'agriculture — le rendement par hectare; lorsque, d'autre part, les coûts de production pourraient se réduire à la suite d'importations à meilleur marché de moyens techniques en provenance des pays participants.

Ces hypothèses sont une aide pour remonter — c'est-à-dire pour parcourir à rebours — le chemin déjà parcouru par le protectionnisme, depuis quelques dizaines d'années. En effet, entre les deux guerres, aux mesures douanières en vigueur vinrent s'ajouter les différentes formes des restrictions quantitatives.

13. *La graduation s'impose même dans la réduction des restrictions quantitatives.*

Toutefois, même en se proposant d'éliminer d'abord les restrictions quantitatives, il est difficile qu'elles puissent disparaître d'un seul coup, si l'on tient compte de la complexité des mesures qui vont de l'organisation du marché intérieur à la reglementation du commerce extérieur de chaque pays. La documentation recueillie à Paris par le Groupe des experts — chargés de proposer l'organisation des marchés agricoles européens — permet de juger de la masse énorme des dispositions limitatives, actuellement en vigueur. C'est donc être réaliste que de prévoir, encore dans l'abolition de ces restrictions, une certaine gradation, qui servira à atténuer tout préjudice et à permettre le développement graduel des avantages dont nous avons parlé. Au cas où l'on voudrait brûler les étapes, le préjudice se manifesterait dans toute son ampleur et les avantages ne se vérifieraient que lentement. Au cas où l'on voudrait négliger un système de transition, les différents pays se trouveraient dans l'obligation de rendre *uniformes* leurs législations respectives pour tout ce qui a trait à la production, à la transformation, à la consommation et aux échanges d'un certains nombre

de produits. Or, l'adoption de telles mesures, à soumettre à l'approbation des Parlements, demanderait, abstraction faite même de leur contenu, une très longue période de temps, durant laquelle l'intégration économique de l'Europe ne pourrait même pas commencer à fonctionner, sans risque de graves perturbations.

D'où le besoin d'un „système transitoire" entre la situation actuelle de protectionnisme à outrance et le but de l'intégration, qui est de créer un marché où les marchandises, les hommes et l'épargne puissent circuler plus librement. Système de transition d'autant plus efficace que le secteur où il est appelé à agir est vulnérable. Bien que sorti de l'étude du secteur agricole, le système que nous préconisons peut bien s'appliquer à tout autre secteur.

La première méthode appliquée par l'OECE a été la libération — c'est-à-dire l'admission dans les Pays sans rencontrer des obstacles de nature quantitative — des marchandises dans la mesure progressive de 50, 60, 75 et 90 *en plus* des quantités importées en 1948 par les particuliers; par les particuliers — et non par l'Etat — car dans ces pourcentages on n'inclut pas le commerce international réalisé par l'Etat, ou pour le compte de l'Etat.

A ce propos, il semble opportun de souligner que l'obligation de pousser la libération des échanges à 90% des importations de 1948 et 75% au moins dans chacune des trois catégories — produits alimentaires, matières premières et produits manufacturés — a été respectée par presque tous les pays. Seulement certains d'entre eux ont invoqué des clauses de sauvegarde pour des raisons de balance des paiements d'intérêts nationaux et d'équité.

La position de l'Angleterre dépendait en grande partie du succès dans la lutte engagée contre l'inflation. De son côté, la France non seulement restait encore loin du pourcentage de 90% des importations de 1948, mais, après avoir libéré certains produits dans une faible mesure, appliquait à leur importation des taxes spéciales dites de „compensation" qui remettaient en cause chaque pas officiellement accompli vers la libération. En même temps les exportations étaient favorisées par les formes les plus variées d'aide et de soutien, ce qui bouleversait les résultats d'accords très laborieux pour avancer dans la voie de la libération.

Dans la méthode des pourcentages de libération l'OECE a persisté pendant presque huit ans. Les progrès ont été considérables, même si pour la plupart ils sont ignorés. La coordination des politiques économiques des pays membres est en progres. Dans le secteur agricole, par exemple, on a pu constater partout une augmentation de la production: ce qui n'élimine nullement la nécessité pour chaque Gouvernement de reviser sa propre politique agricole en tenant compte des directives des autres. Sur la base de „consul-

tations" entre Gouvernements préparées pour l'examen de problèmes particuliers on a pu dessiner une politique commune aux dix sept pays, en mesure de faire face aux besoins de chacun, besoins auxquels on essayerait en vain de faire face, si chaque pays s'isolait.

L'augmentation des échanges intra-européens est un progrès et l'élément fondamental de toute politique commune.

Par ailleurs — comme il n'était pas facile d'envisager de progrès ultérieurs par la méthode des augmentations des pourcentages de libération — après de longues discussions d'autres systèmes, dits „d'assouplissements des échanges" ont été proposés: élargissement graduel de contingents avec préférence d'achat dans la zone; clause d'amélioration d'un tel élargissement; prix minima; systèmes de trois phases; libérations saisonnières. Aujourd'hui l'unique moyen pour progresser vers la libération se révèle, justement, être ce groupe de méthodes proposés par l'OECE, parfois après une expérience fructueuse dans le domaine des accords bilatéraux.

Quelle que soit l'impulsion politique à donner à l'idée de libération des échanges, il n'y a pas moyen de l'aborder par des systèmes autres que ceux déjà énoncés. Le mérite de l'OECE est de l'avoir élaborée et mise en lumière.

14. *Elargissement graduel des contingents.*

Un système plus élastique des pourcentages de libération, à échéance fixe, est celui de l'élargissement graduel des contingents présenté en 1950 par l'auteur de ces notes.

Pour pousser les producteurs à produire davantage — en vue de soustraire le groupe de pays qui veulent s'intégrer à la dépendance de l'étranger — il faut leur *assurer des débouchés* plus étendus. Une telle „assurance" peut se concrétiser au moyen d'un accord, suivant lequel les pays participant à l' „exercice" d'intégration s'engagent à importer, à des prix établis, des „quantités" déterminées des disponibilités exportables d'un produit donné, en les achetant chez les pays de l'union, *avant* de s'adresser à des *pays tiers*. Quantités de plus en plus larges et prix de plus en plus réduits — au cas où, au début, ces prix seraient supérieurs aux prix en vigueur dans les pays tiers — seraient établis *multilatéralement* par des négociations entre importateurs et exportateurs du produit considéré et mis à jour périodiquement, en général tous les ans.

De cette façon — par augmentation graduelle des quantités à importer — on essaie d'élargir la demande régionale, afin de permettre à l'offre régionale — c'est-à-dire à la production économique — de s'élargir, elle-aussi, grâce à l'assurance de débouchés.

Assurance fournie par la clause de la *priorité d'achat* chez les pays participants. Assurance qui laisse subsister, dans l'offre régionale, le *principe de la concurrence*, soit entre exportateurs d'un même pays — qui utilisent le „contingent" plus large accordé par le pays importateur — soit entre l'importateur établi des augmentations de contingents plus sensibles, si le pays qui exporte vend à meilleur compte.

Le système de la „quote à importer" — qui pourrait aussi être appelé système de l' „élargissement graduel des contingents" ou bien le système de l' „engagement d'achat graduellement croissant, avec un caractère de priorité" — paraît le plus propre à assurer un fonctionnement actif et durable de l'organisation des marchés européens — et en particulier de marchés agricoles — eu égard à tous les produits pour lesquels les pays participants à l'OECE n'auraient pas encore accepté le principe de la „libération" des échanges: c'est-à-dire le principe de l' „abolition" des contingents, des primes, des subventions et de tout autre expédient de protection *différent* de droits de douane. Un exemple pourra montrer comment peut agir la concurrence entre exportateurs de pays tiers.

Un pays importateur d'un produit l'achète dans trois pays exportateurs participants. Le pays A produit à un coût de 10; le pays B à un coût de 9; le pays C à un coût de 8; et tous trois vendent le produit à des prix légèrement supérieurs à ceux ci-dessus indiqués. Il y a lieu de croire que le pays importateur achèrera des quantités moindres chez A, qui produit à un coût de 10, et des quantités plus fortes chez C, dont le prix de revient est 8; toutefois si, d'une part, A parvient à réduire son prix de revient jusqu'à 8; si, d'autre part, dans le pays *importateur* la population augmente, les besoins de la consommation s'accroissent et l'économie manifeste une tendence à l'expansion; le pays importateur n'aura plus aucune raison pour acheter moins chez A et davantage chez C. C'est chez B au contraire, qu'il achetera le moins, si B continue à produire à un coût de 9. Dans ce cas le contingent minimum établi initialement avec B, n'augmentera pas considérablement, tandis que les contingents établis initialement avec A et C augmenteront, au fur et à mesure que diminueront les prix offerts par le pays exportateur. De cette façon, à chaque exportateur reste assuré un minimum de débouchés qui pourra s'accroître si le prix baisse. Et il sera porté a accueillir toutes les possibilités de perfectionnement de la production pour réduire son prix de revient dans son propre intérêt et dans l'intérêt de tous les membres de la collectivité. C'est d'après ce principe de concurrence que les exportateurs aux prix le plus bas, finissent par être préférés aux concurrents: dans chaque pays, comme dans le territoire des pays participants.

Enfin, lorsque l'action de la concurrence est assurée; lorsque la demande régionale s'accroît par élargissement progressif des contingents, à des prix qui se rapprochent de plus en plus de ceux pratiqués sur des marchés tiers et que l'offre régionale — c'est-à-dire la production globale — elle aussi s'amplifie et devient la plus économique la „préference d'achat" dans les pays participants *avant* les pays tiers n'a plus de raison d'être. Elle peut disparaître. Et elle peut disparaître, précisément, parce que dans l'offre régionale la concurrence entre exportateurs laisse en ligne seulement le *producteur le plus économique — ou les producteurs les plus économiques,* si l'offre ne peut se concentrer en un seul. Ce sont ces producteurs qui, pour certains produits, peuvent être à même de faire face à la concurrence des marchés tiers, avec la seule défense des droits de douane.

De sorte que — soit dans le cas d'une intégration totale entre six pays, soit dans le cas d'une intégration par secteur entre dix sept pays — le principe de la „préférence commerciale" pour les contingents à importer, avant tout autre, des pays participants n'agirait jamais au détriment des échanges avec d'autres pays, au cas où l'on envisagerait — dans le pays importateur — un accroissement de population, un accroissement des besoins à satisfaire et une économie en expansion.

Une fois satisfaite l'importation du contingent convenu avec les pays participants, chaque pays reste parfaitement libre d'importer des marchandises en provenance de pays tiers, ou bien d'exporter, dans des pays tiers, tous les biens et services qu'il jugera bon. La préference commerciale n'est nécessaire que jusqu'au moment où le développement de la demande régionale permet le développement de l'offre régionale la *plus économique,* grâce à l'action de la concurrence. Ce qui implique — qu'il s'agisse de six, ou de dix-sept pays, que l'offre régionale se concentre dans les pays les plus propres à satisfaire la demande existante, en raison de leurs conditions naturelles et de leur structure économique. Par conséquent, toute les productions artificiellement soutenues devront disparaître, fut ce que graduellement.

15. *Le système de la quote à importer satisfait les exigences des trois ordres d'assurances.*

Un système différent de celui de la „quote à importer" au lieu de réaliser le principe de la concurrence, risquerait de „cristalliser" la situation existante. Si, pour les achats d'un pays qui importe de trois pays exportateurs — A, B et C — on voulait fixer un „prix européen unique", ce prix ne pourrait jamais être inférieur au prix qui servirait à couvrir aussi le coût de production du pays A, qui

produit dans les conditions les moins économiques. Partant, un prix européen unique tendrait à immobiliser l'état de la production existante, sans créer de stimulant propre à l'améliorer.

Par contre, à la base de l'organisation des marchés agricoles européens, on rencontre le nécessité de satisfaire, en même temps et dans la mesure convenable, les exigences de trois ordres d'assurances.

A) — L'assurance pour le pays *exportateur* d'écouler ses disponibilités exportables. Nous venons de voir que le système de la quote à importer, à un prix qui couvre le coût de production du pays exportateur, fait aussitôt entrer celui-ci en concurrence avec les autres exportateurs; il le pousse à *améliorer* sa production, à en réduire le coût et, en favorisant son propre intérêt, à avantager, en définitive, tous les consommateurs du produit exporté.

B) — L'assurance pour les *consommateurs* du pays importateur, qui auront le produit à des prix convenables. C'est une assurance que le système de la „quote à importer" à des prix convenus avec les divers pays exportateurs remplit pleinement. Même au début du fonctionnement de l'organisation des marchés agricoles, ces prix ne pourront jamais s'écarter longtemps des coûts respectifs de ces marchés; d'une part, parce que l'exportateur est déjà assuré de pouvoir écouler son produit et ne devrait pas vouloir réaliser des gains ultérieurs; en pratiquant un prix supérieur au coût de production, d'autre part, parce qu'il entre aussitôt en concurrence avec d'autres exportateurs, et il ne serait pas de son intérêt d'élever le prix ou de maintenir un coût de production trop élevé.

C) — L'assurance pour les *producteurs* du produit en question, dans le pays importateur. Assurance offerte par la protection de douane existante, intégrée éventuellement par l'application d'un *prix minimum* au-dessous duquel le produit ne pourrait jamais entrer dans le pays.

On pourrait objecter que, quant à la priorité d'achat d'une quantité des disponibilités exportables des autres pays, on reste toujours dans la sphère des négociations bilatérales entre importateurs et exportateurs. Cependant cette objection n'est fondée qu'en apparence. D'une part, toutes négociations multilatérales ne sont qu'une série de négociations bilatérales, implicites ou explicites. D'autre part, l'avantage réel que l'on entrevoit dans le système de quote à importer par priorité est la *simultanéité* des négociations entre importateurs et exportateurs, en vue de fixer cette quote et son prix. Voilà ce qui est, ou pourra être, l'apport constructif d'une organisation européenne en matière d'échanges.

Il a été déjà fait allusion à la possibilité que la protection de douane existante fonctionne, entre temps, comme mécanisme équi-

librant les différences de coût entre les marchés des pays participants, et que dans des cas particulier, soit prévue l'application, par le pays importateur, d'un *prix minimum* au-dessous duquel le produit considéré ne pourrait jamais entrer dans le marché. Ce sont là des mesures complémentaires. Et quant au prix minimum, il peut paraître préférable de recourir à un prix fixé *multilatéralement*, c'est-à-dire d'un commun accord par les importateurs et les exportateurs de divers pays. Mais le prix fixé multilatéralement ne peut même pas fonctionner tout seul, ni en faveur de l'exportateur. Il doit toujours être accompagné de l'importation — ayant un caractère de priorité — de *quantités déterminées* entre pays participant à l'accord. En outre, il laisse toujours subsister l'inconvénient que, même lorsque le pays importateur applique un *seul* prix minimum pour un certain produit, l'exportateur se trouve en présence de prix minima s'il y a d'autre pays importateurs.

D'autre part, les pays participants pourront aussi se réserver la faculté d'examiner périodiquement l'utilité de s'unir entre eux pour importer — à des conditions d'achat plus favorables — des produits qu'ils désirent acheter *en sus* de la quote à importer, ou bien des produits qui abondent sur les marchés de pays qui ne *participent pas* à l'accord. Et au cas où il ne serait pas possible d'arriver à un accord entre *tous* les pays participants, il y aurait toujours la possibilité que *quelques-uns d'entre eux* s'associent pour effectuer des importations plus étendues, ou provenant d'autres marchés. Par conséquent, tous les ans, tous les semestres, ou bien à tout autre rythme de temps, les pays participants pourront examiner la possibilité d'acheter, en commun, sur d'autres marchés, certaines quantités du produit en question, après avoir acheté la quote à importer.

De cette façon, chacun des pays participants à l'organisation des marchés européens peut s'attendre:

a) — à des avantages pour l'écoulement de ses disponibilités exportables;

b) — à des avantages pour les *consommateurs* de nombreux produits, importés sur la base d'une forte concurrence entre exportateurs;

c) — à des avantages pour des *importations* éventuelles, effectuées à des conditions plus favorables, de pays qui sont en dehors de l'organisation;

d) — à des avantages découlant avec le temps, d'une révision et une *rationalisation progressives des directives suivies pour la production;* révision et rationalisation tendant à réaliser des produits plus conformes aux conditions du milieu, plus économiques, plus susceptibles d'améliorer la consommation et qui, en définitive, fassent éliminer, ainsi qu'il a été dit, les productions marginales.

16. *Problèmes de l'intensification graduelle des échanges entre pays.*

a) — *Multilatéralité des négociations et automatisme dans l'abolition des restrictions quantitatives.*

Même en considérant seulement l'atténuation et la suppression des restrictions quantitatives sous leurs formes multiples, on ne peut pas échapper à certains problèmes. Nous avons parlé d'approche d'intégration par secteur, et de préférence d'achat auprès des pays membres. Or, il nous semble utile de mentionner d'autres problèmes.

La notion de quantités à importer sans cesse croissantes et de *prix* décroissants, stipulés *multilatéralement,* entre importateurs et exportateurs, d'un produit donné, et périodiquement révisés — tous les ans, en général —, également par le système des négociations entre exportateurs et importateurs, amème le principe de la préférence commerciale à se concrétiser par la multilatéralité des accords entre pays.

Tout ceci — il est bon de le répéter — ne crée pas de „bloc" de pays, pas d'unité européenne autarcique, si l'offre des exportateurs de chaque pays membre de l'union contient toujours un principe de concurrence permettant à l'exportateur le plus économique de l'emporter sur les autres et, par conséquent, permettant à l'offre régionale de se porter sur le marché dans les conditions les plus avantageuses.

Mais, en ce qui concerne l'expansion des échanges au moyen d'élargissement de contingents, le problème se pose d'un certain *automatisme* — à égalité de prix — dans la progression de cette expansion, en contraste avec une progression qui pourrait être laissée seulement aux succès des négociations, même multilatérales. Or, dès le début de l'exercice de l'organisation des marchés européens, on s'est rendu compte de l'utilité d'un certain automatisme dans la progression de l'expansion des contingents et des échanges, un automatisme qui pourrait s'adoucir dans certains cas particuliers mais qui devrait constituer toujours une directive de base.

b) — *Compatibilité entre préférence commerciale et prix minimum.*

Lorsque les échanges sont réglés par des systèmes de „prix minimum" le point de vue de la préférence commerciale, pour se concrétiser pratiquement, devrait exprimer une formule qui *obligerait* tout pays importateur à importer *au moins une certaine quantité* des pays participants. Faute d'une telle obligation, au cas où il n'y

aurait que le prix minimum — comme le pays importateur, en vertu d'accords précédents, reçoit le même produit en provenance des pays tiers — l'afflux de ce produit sur le marché importateur pourrait déprécier son prix au-dessous du minimum et rendre ainsi impossible l'afflux de ce même produit en provenance des pays participants, malgré l'accord sur l'adoption d'une préférence commerciale. L'organisation des marchés entre pays participants est un avantage pour les pays tiers qu'aucun pacte ne lie.

c) — *Compatibilité entre préférence commerciale et courant d'échanges avec des pays tiers.*

D'autre part, la conception d'une économie européenne en *expansion,* en raison de l'accroissement de la population et pour élever le standard de vie de tant de populations, évite d'envisager des baisses considérables dans les courants „d'échanges traditionnel" avec des pays tiers. Par exemple, après un examen attentif en commun de la situation des marchés, on pourrait bien envisager des contingents „réservés à l'exportation" en provenance des pays participants vers les marchés traditionnels. On pourrait également songer à reconnaître les engagements en cours en exécution des contrats à longue échéance et — mettons — de l' „Accord International du Blé". Dans une économie en expansion il est toujours possible, pour les pays participants, de sauvegarder une grande partie des importations habituelles.

d) — *Recherche de compensation.*

Il y a encore le problème des *compensations.* Les pays exportateurs qui tirent un bénéfice du développement des échanges de leurs produits, devront, à leur tour, acheter des marchandises dans les pays importateurs.

Une certaine compensation d'échanges entre pays importateurs et pays exportateurs commence à se réaliser dès que l'atténuation graduelle des mesures protectrices s'applique à un nombre sans cesse croissant de produits. La contre-partie peut être recherchée aussi bien dans le secteur agricole — parmi les produits auxquels ne s'applique pas encore l'augmentation graduelle des quantités à importer — que dans les secteurs non agricoles; par exemple, parmi les moyens techniques pour la production de ces mêmes produits agricoles, ou bien parmi d'autres produits industriels.

L'étude de ces questions de compensation ne peut être faite que par de grands organismes — tels que, par exemple, le Comité des Echanges de l'OECE — qui ont une vue générale de ces mouvements et la connaissance des échanges de tous les secteurs de chaque pays.

e) — *Systèmes pratiques pour activer les échanges, dans les conditions actuelles.*

Toujours au sujet de l'intensification des échanges, après d'amples débats et d'après les recherches visant les conséquences qu'elle peut avoir sur l'économie des pays importateurs et exportateurs, trois systèmes ont été proposés, selon les caractéristiques particulières et les exigences de marché de trois groupes de produits:

a) — *Céréales* — quantités en augmentation progressive, avec engagement de livraison et de prix convenu multilatéralement;

b) — *Lait, fromage* — quantités en augmentation progressive, sans engagement de prix, ni de prise de livraison. Toutefois le pays importateur s'engage à assurer la libre circulation des quantités stipulées dans l'accord, avec la seule limitation des prix minimum et maximum;

c) — *Fruits, légumes* — système de prix minimum, qui soit compatible avec un système de quantité minime à importer. Or, quoique les systèmes proposés pour les produits de l'horticulture d'une part, et pour le lait et les fromages, d'autre part, semblent différents, nous avons déjà dit que, chaque fois qu'il y a lieu d'appliquer les prix minima, il est opportun de stipuler des engagements qui rendent opérante la *préférence commerciale*. Par ex., dans le cas des produits de l'horticulture, l'engagement d'importer au moins une quantité *minima* des pays participants.

f) — *Harmonisation des politiques douanières.*

L'effort d' „organisation" des marchés agricoles européens est la première étape parcourue sur le chemin qui mène à l' „unification" de ces marchés. On y parvient au moyen d'une atténuation graduelle des restrictions quantitatives existantes. Mais cette atténuation ne conduirait elle-même qu'à des résultats partiels s'il manquait, d'une part, une certaine „normalisation" de la protection douanière — „normalisation" signifie non seulement défense de l'augmenter, mais ferme résolution de la diminuer — et, d'autre part, la suppression des droits de douane „prohibitifs" existant à l'intérieur du groupe des pays participants.

Non moins immanente est la nécessité de réduire — à une époque ultérieure — l'écart existant entre les niveaux des droits de douane, appliqués par les différents pays participants aux produits importés des pays tiers. Ce sont là des problèmes que nous mentionnons uniquement parce qu'ils sont intimement liés à l'effort d'organisation des marchés européens. L'examen approfondi de cette question devrait être confié à des organismes compétents (GATT).

Il est hors de doute que la participation de certains pays impor-

tateurs — Allemagne et Angleterre, par exemple — présente un vif intérêt pour l'organisation des marchés.

Il serait donc opportun de ne pas exclure „a priori" certaines formules souples d'un caractère exeptionnel.

17. — *L'organisme de crédit*

Sur la base des projets bien définis, aux points de vue technique et financier, un organisme financier d'investissements et de crédit examinera l'utilité d'accorder des prêts à des gouvernements ou à des entrepreneurs garantis par des gouvernements. Ces prêts devraient être destinés à étendre des perfectionnements de la production aux pays où le coût de production est plus élevé; à permettre la réalisation de travaux de transformation de terres, pour la meilleure utilisation des facteurs productifs: en particulier, des forces de travail disponibles dans le champ de l'accord; à donner aux productions et aux consommations des directives qui répondent le mieux aux buts de l'organisation des marchés.

Une initiative éventuelle de la Banque Internationale pour la Reconstruction et le Développement pourrait résoudre en grande partie le problème des investissements. Mais, même si l'on reconnaît indispensable le concours d'un organisme comme celui cidessus mentionné, il ne pourra être assuré avant longtemps.

18. — *L'organisme de paiements.*

Avec l'appui de réserves adéquates de devises et d'or, l'Union Européenne des Paiements — ou un autre organisme — est à même d'assurer un régime de paiements multilatéraux, nécessaire afin que les échanges entre marchés organisés puissent s'effectuer, et même s'intensifier, sans interruption, aussi longtemps que durera l'inconvertibilité de certaines monnaies en dollars et l'existence de nombreux obstacles à ces échanges.

Même au cas où se réaliseraient les conditions indispensables à la convertibilité en dollars des monnaies de *certains* pays, il resterait toujours, pour une période dont il n'est pas aisé de prévoir la durée, des monnaies européennes „non convertibles" en dollars, grâce à un mécanisme comme celui de l'UEP. Le besoin se fera dons toujours sentir d'un organisme de paiements régionaux, â côté d'un organisme mondial qui aurait, lui, la fonction de veiller à la préservation de la convertibilité en dollars de *certaines* monnaies européennes.

Pour cela il faut des réserves de deux types: les réserves nécessaires pour maintenir un organisme de paiements multilatéraux, comme celui de l'Union pour la continuité et le développement du commerce entre pays dont les monnaies n'ont pas encore un pou-

voir d'achat stable et ne sont pas encore convertibles en dollars, mais pour lesquelles on désire une „transférabilité considérable"; les réserves nécessaires pour accorder des crédits de stabilisation afin d'assurer la convertibilité en dollars de monnaies qui auraient atteint un pouvoir d'achat assez stable.

Pour ces deux types de réserves il ne paraît pas trop osé d'affirmer que leur montant respectif pourrait bien être *contenu* dans des limites raisonnables. Si, d'une part, au cours d'un processus graduel d'intégration de leurs économies, les pays participants pouvaient s'engager à absorber des quantités *graduellement croissantes* des disponibilités exportables d'autres pays, on éviterait soit que tous les pays ne se mettent à exporter à l'envie vers les marchés des autres; soit que quelques pays ne réduisent plus ou moins radicalement leurs importations. Si, d'autre part, la convertibilité en dollars de monnaies à pouvoir d'achat stable pouvait être limitée — au moins au début du nouveau statut monétaire — à certaines transactions seulement, le montant des réserves *totales* pourrait ne pas être trop considérable.

Mais ce n'est pas là le point le plus important. Ce n'est pas le montant des réserves qui préoccupe, parce que ce n'est pas le montant des réserves que peut „préserver" la convertibilité d'une monnaie faible en une monnaie forte, ou une certaine transférabilité entre des monnaies pas encore convertibles en dollars. L'UEP, ou un autre organisme semblable, sera nécessaire aussi longtemps que ne seront pas réalisées *toutes* les conditions indispensables à la convertibilité en dollars de *toutes* les monnaies des pays participants. Et un tel organisme pourra aisément remplir la fonction de faciliter les paiements pour les échanges de produits agricoles qui iraîent en augmentant.

La condition fondamentale — pour préserver une convertibilité réalisée et assurer une transférabilité considérable des monnaies inconvertibles — c'est l'*élimination progressive des obstacles aux échanges,* en commençant par les restrictions — quantitatives, qualitatives, administratives, directes et indirectes — suivant le système de transition indiqué, qui arrive jusqu'à l'abaissement des droits de douane, lorsqu'il sera possible avec le temps.

19. — *Organisme central pour provoquer les contacts entre les divers pays ainsi que pour coordonner leurs politiques économiques.*

Un Conseil *permanent* des Ministres de l'Agriculture, institué dans le sein de l'OECE, pourrait avoir à sa disposition un comité de Suppléants, formé de représentants des pays participant à l'organisation des marchés européens, répartis en divers sous-comités et

disposant d'un Secrétariat. Le Comité des Suppléants exercerait les fonctions répondant aux buts de l'Organisation déjà enoncés et à l'application des méthodes indiquées.

Dans leurs grandes lignes, les fonctions du Conseil des Ministres et des Comités des Suppléants pourraient être:

a) — de provoquer des rencontres profitables entre pays importateurs et pays exportateurs, afin qu'ils déterminent *multilatéralement* la quote à importer et le prix d'absorption des disponibilités exportables et revisent périodiquement la quote en vue de l'augmenter;

b) — de veiller au respect des engagements pris par les pays participants;

c) — en cas d'infraction par l'un de ces pays, de conseiller à l'organisme financier compétent de ne pas accorder, ou de suspendre, les investissements et l'octroi de crédits à ce pays;

d) — de veiller à ce que les exportations aient lieu sans „dumping", doubles prix, subventions ou autres expédients propres à altérer l'égalité des positions de départ, et d'adresser aux pays qui les pratiqueraient des recommandations „obligatoires" de s'en abstenir;

e) — d'examiner toute autre forme de protection, pratiquée sur la base de considérations étrangères aux buts de l'organisation des marchés agricoles, et d'en recommander l'élimination dans une période de temps déterminée;

f) — sur la base des échanges accrus, d'étudier la revision des méthodes suivies concernant la production et les consommations, et de provoquer des investissements et des concessions de crédits, surtout à l'égard des pays qui produisent à un coût plus élevé et sont susceptibles de l'abaisser par l'adoption de perfectionnements de la production.

20. — *L'initiative du Marché Commun*

Toutefois, même si l'on peut reconnaître que la coopération du type OECE a donné lieu à de très importantes initiatives pour réduire les restrictions quantitatives, intensifier les échanges et permettre une transférabilité accrue des monnaies européennes — certaines personnalités ont bien voulu souligner que les pays membres sont restés indépendants quant à leurs décisions politiques. D'autres personnalités ont bien voulu rappeler que, depuis 11 ans, le Benelux n'a abouti ni à un marché commun, ni même à une union simplement douanière. D'autres encore pensent que pour se constituer en unité consciente des ses propres tâches, l'Europe ne peut pas se satisfaire d'une collaboration de genre. Il est nécessaire d'en arriver à l'intégration politique et économique. Il ne s'agit pas tant

d'éliminer des obstacles, que de créer une „politique commune" des différents gouvernements, sur la base des responsabilités, elles aussi, communes. L'OECE, bien sûr, a déjà réalisé une certaine coordination des politiques de consommation de production, d'échanges. Mais la nécessité s'est manifestée d'une coordination bien plus étroite et efficace.

Six Pays — Allemagne, Belgique, France, Italie, Luxembourg, Pays Bas — membres de l'OECE, tout en assurant une pleine collaboration à cette Organisation, se sont donnés, avec beaucoup d'entrain, à la création d'un „Marché Commun". Ce n'était pas leur première initiative. Déjà en 1952 — pour des raisons politiques: éliminer les rivalités franco-allemandes pour la possession d'industries de base — les six Pays avaient essayé d'instaurer, par la création de la Communauté du Charbon et de l'Acier (C.E.C.A.) un marché commun de ces deux produits, résultat de l'abolition des frontières économiques nationales.

En avril 1956, dans un rapport qui a pris le nom de M. Spaak, Ministre belge des Affaires Etrangères, les six Pays, ont prévu l'abolition des contingents, des barrières douanières, et d'autres obstacles, dans le but de créer une Union non seulement douanière mais économique: c'est-à-dire couvrant l'entière structure de chaque pays. Il est de toute évidence que la création d'une telle Union rend indispensable une coordination poussée de la politique économique de chaque pays. Les auteurs du rapport n'ont pas manqué de s'en rendre parfaitement compte. Et le Traité porte au premier plan cette nécessité d'une „politique commune" aux six pays.

Ce qui est singulier c'est que le Marché Commun n'a jamais été défini: pas même dans sa première réalisation. L'art. 4 du Traité de la CECA souligne en effet les „pratiques" tenues pour „incompatibles" avec le Marché Commun. Au terme de l'art. 4, quatre séries „d'attentats" peuvent être commis contre le Marché Commun: le *compartimentage* géographique au moyen de droits de douane d'entrée et de sortie, ou de taxes d'effet équivalent — de même que des restrictions quantitatives à la circulation des produits; *discrimation* entre producteurs, entre acheteurs et entre utilisateurs, notamment en ce qui concerne les conditions des prix de livraison et les tarifs de transport; *subventions,* ou *aides* accordées par les Etats, ou bien *charges spéciales* imposées par eux; pratiques *restrictives* tendant à la répartition ou à l'exploitation des marchés, au moyen d'ententes et de concentrations. Mais le Traité de la CECA ne dépasse pas les limites de cette définition négative. Il laisse comprendre que le Marché Commun, ainsi organisé, conduit aux objectif communs que le Traité lui assigne. En effet, le Marché Commun tend à localiser les productions aux points ou elles sont

les plus productives et donc fournissent le maximum de produit. Le Marché Commun du Charbon et de l'Acier tend à diminuer les coûts de production. Par conséquent — toutes conditions égales — il augmente le pouvoir d'achat des populations, il favorise le développement du revenu et l'emploi; il relève le niveau de vie dans les Etats Membres. Certes, il ne peut pas s'identifier avec un marché de libre concurrence du moment que dans la CECA — exemple typique d'intégration par secteur — les Gouvernements restent libres de suivre la politique économique qui — en dehors du charbon et de l'acier — leur paraît plus convenable. Même sans avoir recours à aucune des mesures considérées comme incompatibles avec le marché commun, les gouvernements peuvent toujours par leur politique fiscale (impôts), ou par leur politique de salaire, ou par leur politique sociale, remettre en cause l'égalité absolue des conditions pour les producteurs, les acheteurs et les utilisateurs. L'expérience montre que par leurs „pouvoirs retenus", les Gouvernements peuvent toujours susciter des disparités entre individus, entreprises, groupes d'entreprises, malgré tous les efforts de la CECA pour porter remèdes à des situations semblables.

A ce point de vue par rapport au précédent, le traité concernant la Communauté Economique Européenne représente une amélioration.

Il concerne la structure économique tout entière des six pays. Donc les „pouvoirs retenus" sont plus limités. Mais, comme le traité de la CECA, le Traité de Rome ne contient pas de dèfinition du Marché Commun.

Il parle d'Union douanière et économique, guidée par une politique commune de six pays. Mais il ne s'attache pas à définir le Marché Commun. En effet il aurait été bien difficile de le considérer comme un marché de libre concurrence.

Le Traité envisage la suppression graduelle des contingents, des droits de douane et d'autres obstacles aux échanges entre pays, de même que l'uniformisation des tarifs extérieurs de chaque pays, sur la base de la moyenne arithmétique des tarifs existant. Pour en arriver à de tels résultats une période de douze à quinze ans, de trois étapes de quatre, ou cinq ans chacune semble indispensable.

Il place au premier rang la nécessité que toute la politique économique des six pays soit coordonnée. Mais en quoi consiste la politique commune des six pays?

Prenons le domaine de l'agriculture. Une politique commune doit, avant tout, se proposer certains buts. On peut mentionner: l'augmentation de la productivité; l'accroissement du revenu individuel; un niveau de vie plus élevé pour tous ceux qui travaillent dans l'agriculture; des prix raisonnables de vente à la consomma-

tion; la stabilisation des marchés pour/les soustraire à des fluctuations soudaines de prix et de revenus.

En se proposant ces buts, la politique commune doit tenir compte du caractère particulier de l'activité agricole, découlant des *disparités structurelles naturelles*, et sociales entre les diverses régions agricoles. Elle ne peut pas se passer de la nécessité d'opérer graduellement les ajustements nécessaires. Elle ne peut pas non plus négliger le fait que, dans les Etats membres, l'agriculture constitue un secteur intimement *lié* à l'ensemble de l'économie.

De quoi se sert donc, la politique „commune" des six pays pour réaliser les buts susmentionnés? Elle se sert d'une „organisation commune" des marchés agricoles. Et en quoi consiste l' „organisation commune"? Regardons avant tout — comme le fait le Traité — la période *définitive*. Une fois passée la „période ainsi dite de transition" — une période, nous l'avons dit, de douze à quinze ans l' „organisation commune des marchés" peut prendre la forme: ou bien d'un *accord* entre les six pays en ce qui concerne certaines règles de concurrence, selon lesquelles sont incompatibles avec le marché commun toutes mesures que chaque Gouvernement peut adopter pour fausser le jeu de la concurrence dans l'offre et la demande de certains produits; ou bien d'une *coordination obligatoire* entre les diverses organisations du marché, existant déjà dans chaque pays — par exemple, collectes, soutiens des prix —; ou bien d'une „organisation européenne" pour le marché de certains produits, „organisation" dans laquelle les organisations nationales déjà existantes viendront se fusionner.

Quelle que soit sa forme, l'organisation commune des marchés pourra avoir recours à toute mesure indispensable à atteindre les buts susmentionnés, c'est à dire: réglementation des prix, subventions à la production et au commerce, stockages, monopoles d'achat et de vente à l'intérieur et à l'étranger, autres mécanismes pour la stabilisation du marché, diffusion des connaissances techniques. On voit fort bien qu'il resterait loin de la réalité, celui qui voudrait se figurer le Marché Commun — résultat de l'Union douanière et économique entre six pays — comme un marché de libre concurrence et de libre circulation de biens, agricoles et industriels, de services, de main d'oeuvre, de capitaux, selon la conception individuelle et commerciale de la libre concurrence à la mode d'autrefois. Dans le passé les comportements individuels étaient tous orientés par les différences des coûts de production, résultant de rendements, donc par les conditions naturelles et la combinaison la plus économique des facteurs de production. Aujourd'hui les compétitions sociales et politiques surgissent au premier plan dans la réalité et se superposent à celles des particuliers, en les submergeant au moins

en partie. Sans doute le Marché Commun présentera-t-il un nombre d'obstacles plus limité par rapport à la situation actuelle. La circulation des produits, des services, des capitaux, des hommes sera facilitée par la politique commune des Gouvernements. Mais il ne sera jamais un Marché de libre concurrence, qui ne s'est jamais réalisé.

Si nous revenons à la période de „transition" — qui est vraiment la plus proche et la plus importante, étant donné que le projet de mettre sur pied, d'ici quinze ans, une organisation commune des marchés, ne pourra pas se passer de l'expérience de cette même période — nous pouvons remarquer que — dans le terme de deux ans à partir de l'entrée en vigueur du Traité — la Commission Européenne — organe de l'union économique et douanière entre les six pays — présentera des propositions concrètes pour la mise en application de deux mécanismes: les *prix minima et les contrats multilatéraux,* à plus ou moins long terme.

Le *prix minima,* succédané de l'élargissement graduel des contingents prévu dans le Traité — élargissement que l'économie d'un pays peut ne pas être en mesure de supporter — ne devra pas — on l'affirme — avoir comme conséquence une réduction des échanges existant entre les Etats membres. Toutefois, pendant une certaine période, le pays importateur pourra le fixer „unilatéralement": c'est-à-dire, sans consultation, ou accord préalable, avec le pays exportateur, comme il s'avère pour le prix minimum italo-allemand, à l'occasion de l'accord bilatéral, qui a servi de base à toute proposition émanant de l'OECE. Le Traité de Bruxelles représente donc un pas en arrière, par rapport à l'OECE. La détermination unilatérale du prix minimum limite l'augmentation des échanges qu'on aurait pu prévoir, grâce à l'atténuation progressive des restrictions quantitatives.

Quant aux *contrats multilatéraux,* qu'il nous soit permis de rappeler qu'il y a plusieurs années déjà — en 1950 lors des premières tentatives d'intégration économique européenne, nous nous sommes permis de proposer, pour certains produits, un élargissement graduel des contingents avec préférence d'achat dans les pays participants, sans cependant porter atteinte aux courants commerciaux en cours avec les pays tiers. On prévoyait des achats de quantités croissantes, à des prix graduellement en diminution. Le présent Traité considère les contrats multilatéraux comme des achats dans la zone des six, de quantités toujours croissantes, mais à des prix qui au lieu de diminuer, s'alignent sur les prix du pays importateur, si élevé soit-il. La paradoxe s'explique par ce fait: le pays importateur n'aimera pas payer trop cher la marchandise des autres cinq pays. Alors il se trouvera obligé de réduire le prix sur le marché national.

En résumé, la poussée de concurrence — la mise en oeuvre du principe de concurrence, qu'on souhaite actif pour le développement de l'approche régionale — provient non seulement de l'atténuation des tarifs et des restrictions quantitatives entre les six pays, mais de l'atténuation du tarif de chacun des six pays envers les pays tiers. Les conséquences de cette dernière atténuation devraient au moins démentir les soupçons que le Marché Commun ait voulu créer, entre les six pays, une zone préférentielle, fermée au reste du monde. Ce qui représenterait la pire des erreurs auxquelles l'Europe — qu'elle arrive à être grande ou petite — pourrait se livrer.

Toutefois — nous l'avons dit — l'atténuation du tarif extérieur se fait par l'adoption d'une moyenne arithmétique de tarifs existants. Comme parmi les six pays, il y en a à tarifs élevés, qui les verront baisser; il y en a aussi à tarifs très bas, ou à peine modérés, qui au contraite les verront s'accroître — la concurrence des pays tiers, à travers la diminution des tarifs extérieurs, pourra influencer seulement les pays à tarifs élevés. De sorte que l'ouverture du Marché Commun au reste du monde devient un peu illusoire. Evidemment toute ouverture d'un pays au reste du monde est une mesure au détriment des exportations que les autres cinq pays avaient l'habitude de diriger vers le marché du pays en question: c'est à dire du pays qui peut constater une réduction effective de son tarif extérieur.

A vrai dire, en matière de concurrence de l'extérieur, une poussée violente provient de l'association de Pays et l'OECE, en juillet 1956, chargeait un Groupe de Travail d'étudier les formes et les méthodes possibles d' „association entre l'OECE et l'Union douanière et économique" des six pays, même au moyen de la création d'une „Zone de libre échange".

Dans une Zone de libre échange, comme dans une Union douanière et économique, on doit prévoir, à certaines échéances, l'abolition des droits de douane, des contingents et d'autres entraves aux échanges entre pays de la Zone. Mais — contrairement à ce qui arrive dans l'Union douanière et économique, où chaque Pays aligne son propre tarif en vers les pays tiers sur une moyenne des tarifs existant dans chacun d'eux — les membres de la Zone *gardent* leur propre tarif douanier vis-à-vis des pays tiers.

En ce qui concerne, plus particulièrement, l'élimination des restrictions quantitatives, étant donné: 1) que les pays de la Zone sont également pays membres de l'OECE; 2) que les problèmes à résoudre, c'est-à-dire accroissement de la production et intensification des échanges, restent les mêmes; 3) que les méthodes proposées pour les aborder sont elles aussi les mêmes — il paraît raisonnable qu'une fois décidée la création d'une Zone, on commence par y appliquer les méthodes d'atténuation des obstacles aux échanges,

déjà élaborées par l'OECE. Méthodes qui s'appellent: élargissement graduel des contingents, avec des clauses d'amélioration; prix minima établis d'accord entre importateurs et exportateurs; système des trois phases, appliqué libéralement, comme le fait la Suisse; libération saisonnière.

Egalement, en ce qui concerne l'élimination des droits de douane, il est souhaitable que sa progression aille du même pas que celui prévu dans le Marché Commun, afin d'éviter — comme conséquence de disparités èéventuelles de réduction — des discriminations et des complications administratives. Surtout, à un certain moment, on se trouverait obligé d'appliquer, pour la même marchandise, un tarif si elle provient de pays tiers, un autre, si elle provient des pays de la Zone, un autre encore si elle provient d'un des cinq pays du Marché Commun. Et il est à prévoir l'adoption de contingents tarifaires pour atténuer les conséquences d'importations massives sur l'économie du pays éliminé par les droits de douane.

Dans la Zone enfin — comme à l'OECE, sont prévues des „clauses de sauvegarde" — en d'autres termes des possibilités de déroger à l'obligation d'éliminer restrictions quantitatives et droits de douane. Il ne s'agit pas la non plus de problèmes nouveaux. Toutefois, comme ces clauses représentent des éléments de discrimination — il faudrait considérer la possibilité de les invoquer seulement pour des cas très limités; comme de vraies exceptions dans un système qui — à la lumière de l'expérience déjà acquise à l'OECE — se base sur des consultations préalables entre Gouvernements, sur une collaboration toujours plus intime pour établir des directives de politique économique financière, sociale.

Enfin, avec encore plus d'urgence que dans l'Union douanière et économique, il paraît nécessaire d'adopter dans la Zone les mesures, proposées à l'OECE, visant à éliminer les pratiques qui faussent la concurrence. Elles s'appellent — si elles sont dues à l'initiative des gouvernements — subventions, ou aides à l'exportation, doubles et si elles sont dues à l'initiative des particuliers: „dumping", directives des monopoles, directives des cartels.

De sorte qu'il est facile de constater à quel point toutes les méthodes envisagées et appliquées à l'OECE — après de bien longues années de discussions et de travail — devront être transférées et mises en application dans la Zone de libre échange, laquelle, parfaitement réalisable au point de vue technique, est aussi le premier pas vers une intégration plus poussée des économies des différents pays.

Un pas qui, tôt ou tard, sera suivi inévitablement par d'autres. Et ce pour deux raisons. La nécessité pour les Gouvernements de se consulter et de se tenir en contact pour décourager toute défection

soudaine de l'accord conclu vers un marché plus libre. La nécessité — au fur et à mesure que diminuent les droits de douane et les restrictions quantitatives ayant pour tâche d'égaliser des différences de structure entre pays — de corriger les déséquilibres qui en découlent, par une circulation plus active non seulement de marchandises, mais de services, d'hommes et de capitaux entre pays. Mobilité qui tend à transformer la Zone de libre échange en Union douanière économique.

Mais il y a aussi une troisième nécessité. Au moment où la Zone — contrairement à ce qui se passe en cas de Marché Commun — ne prévoit aucune diminution de tarif douanier vers les pays tiers — c'est-à-dire, ne prévoit aucune communication plus large avec le reste du monde — elle risque de devenir plus autarcique que le Marché Commun. Pourra-t-elle se résigner à rester dans une telle situation?

Je ne le crois pas, car ce n'est pas l'intérêt des pays de la Zone. En effet, les six pays du Marché Commun, en même temps membres de la Zone de Libre Echange, finiront par atteindre une position de compétitivité plus grande que les autres pays de la Zone, qui ne sont pas obligés de réduire leur tarif extérieur. Au fur et à mesure que le tarif extérieur du Marché Commun s'affaiblira les biens et les services du reste du monde tendront à se détourner vers les pays du Marché Commun. Toutefois, pour être importés, les produits et les services du reste du monde doivent bien être payés par des exportations, parmi lesquelles se trouvent des exportations italiennes. Il s'ensuit que chaque membre du Marché Commun essayera de perfectionner sa propre structure et de réduire coûts et prix pour s'assurer des débouchés sur d'autres marchés: justement pour payer les importations en afflux plus grand sur le Marché Commun.

Or la compétitivité plus efficace, qui atteint les pays du Marché Commun, tendra à s'affirmer même par rapport aux pays de la Zone qui, d'une part, assisteront à un détournement des trafics du reste du monde vers le Marché Commun, d'autre part, devront constater une supériorité productive croissante des six pays du Marché Commun. S'ils ne se résignent pas à rester dans une position arriérée — il seront forcés, tôt ou tard, de réduire leur tarif extérieur vers les pays tiers. Ce qui représente la transformation complète de la Zone de Libre Echange en Union douanière et économique.

La formation de l'Europe commence à être une réalité. Le Marché Commun — si l'on parvient à réaliser toutes les bonnes intentions — joue le rôle de brise-glace. Une fois la voie ouverte, va s'installer la Zone de libre échange, géographiquement plus vaste et en voie d'évolution. L'OECE — dont les formules ne peuvent pas ne pas

être empruntées, même déguisées, par le Marché Commun et la Zone et dont l'expérience ne peut pas être ignorée — reste le chantier de création, le point de rencontre des gouvernements et des experts pour se consulter. Il reste — il est fort à souhaiter — le siège de la Zone de libre échange.

L'intégration de l'Europe est en marché. Marche lente, due à des poussées politiques, en concurrence entre elles, et — ne l'oublions pas — aux sacrifices d'un assez petit nombre de personnes qui, depuis longtemps, complêtement ignorées, préparent le tracé d'un long chemin.

EUROPEAN ECONOMIC COOPERATION

by Professor UGO PAPI.

The author has tried to elucidate the reasons why the regional approach is to be accounted the most appropriate means of facing the international situation. The regional approach does tend to create anew a state of protectionism and to pave the way for what, from a geographical point of view, may seem only partial solutions; but ultimately these will clearly converge to the solution of the world's problems: how to produce more, how to produce more cheaply and how to intensify commercial intercourse between countries.

The author specifies the difficulties which stand in the way of an integration of the economies of the different countries. He mentions the detrimental effects that are attendant upon such an integration, but against the interests so harmed, once for all, he sets the advantages which present themselves as much greater and more lasting. Consequently, on balance the economic integration will definitely prove to be an asset. He examines the criteria which have directed the course of action of the OEEC with such happy results. Progress is reflected in the coordination of the economic policies of the member countries. It is also reflected in the considerable increase in trade. Fundamental progress is indicated by the enlarged transferability of the European currencies, which has in its turn made possible the intensification of commercial intercourse.

He draws up a table of measures suggested by the OEEC to the member governments, aiming at a further augmentation of trade. However, as certain countries are interested not so much in eliminating obstacles to free trade as in creating a closer and more efficient coordination, the initiative of the Common Market has come to the fore. After negotiations and studies lasting less than a year and a half it has been translated into an Agreement. The association of the overseas territories with the Organization for European Economic Cooperation gives to the Common Market a much more evolutionary character than could be envisaged when the redaction of the Agreement was first drawn up.

Prof. Papi also confronts the problem of the Free Trade Area and that of the economic connexions between the Common Market and the Free Trade Area. He recommends the necessary evolution of the latter towards a true and proper customs and economic union.

Europe is adapting itself to this sequence of initiatives which should accelerate the realization of both the political objective of European unity and the economic objective of improving the standard of life of the peoples inhabiting the countries concerned.

FISCAL POLICY AND THE COMPOSITION OF GOVERNMENT PURCHASES

by ALAN T. PEACOCK and I. G. STEWART [1])
University of Edinburgh

I. *Introduction*

The *Methodenstreit* surrounding Keynes's classic work on income and employment theory seems to many of the younger generation of economists as belonging to "battles long ago", although one occasionally meets quixotic ancients tilting at pseudo-Keynesian constructions of their own imagination. To most of us, Keynesian method proves to be indispensable. It is the assumptions of Keynesian analysis itself which require careful consideration, and in the field of fiscal policy we have become less sure about the generality of the propositions about the income effects of budgets formulated in the '40s. than formerly.

Apart from the manifest practical difficulties of conducting stabilization policies purely by fiscal means, which do not concern us here, some of the theoretical models of fiscal policy have been shown to be of rather limited application. A very good example of this is found in the famous balanced-budget theorem [2]) which, given particular assumptions, proved that the multiplier effects of a balanced budget were equal to unity. The value of these assumptions has been questioned recently by a number of writers [3]).

In this article the attempt is made to indicate a further line of approach which it would be useful to explore in seeking to generalize the theory of fiscal policy. The *composition* of government expenditure as well as its *aggregate* amount is obviously important

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[1]) The authors are respectively Professor of Economic Science and Lecturer in Economics at the University of Edinburgh. This article represents a contribution to a study of Government Purchasing Policies supervised by the authors. We are grateful to the Rockefeller Foundation for the support offered to this project. The views expressed here are those of the authors and not those of the Foundation.

[2]) See, e.g., H. C. Wallich "Income Generating effects of a Balanced Budget", Quarterly Journal of Economics, November 1944 and T. Haavelmo, "Multiplier Effects of a Balanced Budget", Econometrica, October, 1945.

[3]) For example, W. Baumol and M. Peston, "More on the Multiplier Effects of a Balanced Budget", American Economic Review, March 1955. A. T. Peacock, "A Note on the Balanced Budget Multiplier", Economic Journal, June 1956 and E. Schneider, Zur Frage der Multiplikatorwirkung eines ausgeglichenen Budgets pp. 302-05. Essays in Honour of Erik Lindahl.

in examining the multiplier effects of government expenditure. It is usual to confine the division of expenditure to only two categories — transfers and goods and services. Any generalised theory of fiscal policy must also take account of the composition of expenditure within these two categories. Here we shall not consider in any detail the composition of transfers, but concentrate on the composition of goods and services. We show that the multiplier effects will be different depending on the composition of government purchases from different industrial sectors. Different multiplier effects produced by expenditure on goods and services in the usual fiscal policy models can only be produced by a change in the amount of expenditure, because it is usual to assume that the national output is a homogeneous entity. We must cease thinking in terms of a "one commodity world".

2. *The "Traditional" Expenditure Multiplier.*

It will be useful first of all to restate in simplified form the usual fiscal policy multiplier, This will help us to show how our particular variation of the multiplier can be derived from the simplified case, for we employ the same technique in exposition. It will also point a contrast between the simplified and more complicated cases.

Consider a closed economy in which "one commodity" is produced, the national output Y_o, and there are three purchases of output, producers, households and the government. The government obtains its purchasing power by taxing households through an income tax (T), fixed in yield, but also augments the purchasing power of some households by transfer payments ranging from social benefits to public debt interest. Looking back over a given accounting period, national expenditure equals the value of national output and both are equal to the national income which represents the pre-tax factor income of households, there being no business saving [4]).

In the usual manner we can write our income indentity as follows:

$$Y_o \equiv Y^i \equiv Y_e \equiv C + I + G$$

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[4]) Of course, more sophisticated assumptions can be made about the number of types of decision maker and about the nature of the transactions they have with one another. An elaborate model is not necessary for our purpose, particularly as these familiar modifications would not affect the usual assumptions made about types of government expenditure. For more sophisticated models, see, e.g., R. Turvey, "Notes on Multiplier Theory", *American Economic Review*, June 1953.

where Y_o = national product at factor cost (gross or net).
Y_i = national income at factor cost (gross or net).
Y_c = national expenditure at factor cost (gross or net).
C = expenditure on investment goods by firms (gross or net).
I = expenditure on investment goods by firms
G = expenditure on consumption and investment goods by government.

In order to turn our identity into an equation so that we can analyse the effects of government expenditure on the national income, we must identify the functional relationships in the economy. Following normal practice these are of the crudest sort. We assume a linear consumption function for households and that government expenditure on transfers (L) on goods and services (G) and government taxes (T), and investment (I) are all autonomous variables [5]). Putting these assumptions in symbolic form we have

$$C = \alpha [Y_i + \bar{L} - \bar{T}]$$

i.e. consumption is a fixed proportion of factor income plus transfers ($\bar{L}$) minus tax liabilities ($\bar{T}$); in other words a fixed proportion of disposable income.

$$I = \bar{I}, G = \bar{G}$$ i.e. are autonomous

By substitution we have

$$Y_o = \frac{\bar{G} + \bar{I} + \alpha (\bar{L} - \bar{T})}{1 - \alpha}$$

It follows that

$$\frac{\partial Y}{\partial G} = \frac{1}{1 - \alpha}, \quad \frac{\partial Y}{\partial T} = \frac{\alpha}{1 - \alpha}$$

and, given our assumptions, any given change in government expenditure on goods and services will have a greater multiplier effect than an equal change in transfer expenditure, provided $\alpha < 1$.

This model, as is frequently recognized, makes no allowance for net redistribution between householders as transfer receivers and as taxpayers. In other words the assumption that the community's

[5]) The only modification one might make in these assumptions which has some effect on our analysis of government expenditure effects is to make transfers a function of changes in national income. For example, it would be reasonable to assume that if unemployment benefit were a considerable part of transfers, that these benefits would fall as income rose and *vice versa*. For a model of this sort, see R. Turvey, op.cit..

average and marginal propensity to consume are equal to one another is probably unrealistic. This can easily be taken into account. Indeed, if we take the extreme case and assume that the marginal propensity to consume of transfer receivers is unity and that transfer receivers pay no taxes then the income effects of expenditure on goods and services and of transfers would be equal. On the revenue side, it must be recognized that the assumption of a fixed yield of taxes hardly conforms to reality, and that direct taxes may be a function of income and indirect taxes a function of private expenditure; we may complicate matters further by the introduction of capital taxes.

But in order to refine our analysis so that it may be better suited for practical purposes, we must take the process of disaggregation a stage further. We must think of fiscal policy in a general equilibrium setting, and apply the tools recently forged by Professor Leontief [6]) and others.

3. *The Position of the Public Sector in the Input-output Table.*

For our purpose it is necessary to trace the purchases of government to their industrial destination. Before formalising the relationship between government purchases and other income "flows" in the economy, let us consider estimated figures for a particular economy, the British economy, and present them in a form which will clarify the model which we shall develop in the following section.

The government, like private consumers and investors, is a final buyer of goods and services but purchases these goods and services for collective use. These purchases can be traced to particular industries through an input-output table, which represents a more detailed form of social accounting for an economy in which inter-industry purchases are shown in detail. In Table 1, we present an estimate of inter-industry purchases and sales, the purchases by industries from final sellers (i.e. from factors of production and from foreigners) and tax payments, and the sales to final buyers, including the government, by industries [7]).

Of course, for practical purposes, a much more detailed breakdown by industry would be useful, and in the case of the United Kingdom, it has been possible to provide inter-industry payments for fifty sectors. It must be mentioned, too, that the statistical

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[6]) W. Leontief, *The Structure of American Economy* (2nd. Edition).

[7]) The figures are extracted from the article, "The Practical Uses of Input-output Analysis", by I. G. Stewart, *Scottish Journal of Political Economy*, February, 1958.

Table I

INPUT-OUTPUT TABLE: UNITED KINGDOM - 1956

(Provisionally estimated from published sources)

£ million 1956

Purchases by	Agric. etc.	Mining etc.	Manu-factures	Bldg. and Contg.	Gas, elec. and water	Other	Total inter-med. outputs Cols. 1—6	Final buyers				Total final output (Cols. 8—11)	Total output (Cols. 7+12)
								Per-sons	Govt.	Cap. formn.	Ex-ports		
Sales by	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Agriculture, forestry, etc.	—	—	*773*	—	—	—	*773*	700	12	—	15	727	*1,500*
2. Mining & quarrying	*8*	—	*270*	*50*	*190*	*70*	*588*	140	12	5	85	242	*830*
3. Manufactures	*340*	*90*	—	*570*	*110*	*760*	*1,870*	5,450	670	1,560	3,150	10,830	*12,700*
4. Building and contracting	*44*	*30*	*100*	—	*10*	*71*	*255*	250	157	1,230	18	1,655	*1,910*
5. Gas, electricity and water	*29*	*15*	*175*	*25*	—	*85*	*329*	420	47	95	9	571	*900*
6. Other industries and trade [1])	*140*	*25*	*1,353*	*115*	*108*	—	*1,741*	4,800	2,500	150	925	8,375	*10,116*
7. Imports	154	6	2,065	55	5	350	2,635	1,039	92	340	162	1,633	4,268
8. Wages, profits, etc.	795	664	6,914	1,075	437	8,054	17,939	—	—	—	—	—	17,939
9. Taxes on expend-iture *less* subsidies	*—10*	—	*1,050*	*20*	*40*	*726*	1,826	610	10	10	—	630	2,456
10. Total input	*1,500*	*830*	*12,700*	*1,910*	*900*	*10,116*	*27,956*	13,409	3,500	3,390	4,364	24,663	*52,619*

[1]) Transport, communications, distributive trades, financial and other services, public administration and defence, public health and educational services, ownership of dwellings, etc.

problems involved in obtaining the information and the conceptual problem of defining an industry are formidable. But these are matters we cannot consider in an article concerned with the theory of fiscal policy.

It is clear from this table that in an economy such as Great Britain in which the government purchases a large part of the total production of goods and services, the influence of the government on the composition of production will be considerable. It follows that the effects of government purchasing on the level of incomes and employment, and on the balance of payments will depend not only on the aggregate expenditure of government but also on its composition.

From Table I it would appear that government current expenditure is distributed among the six industrial groups and imports in such a way that a given rise in total current government spending is likely to have a greater impact on Manufactures, Building and Other Trades than on, say, Mining and Agriculture. The first impact of a change in government expenditure on one of these sectors will be to cause some associated rise in incomes earned by those working in the industries *within* the sector directly affected. For example a ten per cent rise in spending by government on the products of Sector 3 — Manufactures — may be expected to cause some increase in the figure for Wages, Profits, etc. in Column 3, the exact amount of such an increase depending on the functional relationship between the incomes generated (= Net Output) and Total Sales by that Sector. There would, however, be other secondary, or derivative effects since a rise in the output of Manufactures may reasonably be calculated to bring small associated increases in other sectors in its train, as manufacturers step up purchases of materials etc. from other industries and from the fuel and power sector.

These two effects, the one direct, the other indirect, can be appreciated more clearly if the inter-industry purchases in Table I are converted into input-output proportions. The figures given in Table 2 are obtained by expressing each element in the first six columns of Table I as a decimal ratio of its own column total. Hence, for example wages, profits, etc. in Agriculture are estimated at 53% of total inputs into that sector, and the average "import-content" of Manufactures as 16.3%.

If now public spending is assumed to go up by ten per cent for *each* sector, with no changes in other final expenditures, then the £ 350 millions would largely be directed towards Manufactures (£ 67 millions) and Other Industries will be according to the simple proportion in Table 2, £mn. $0.794 \times 250 =$ £ 198½ millions.

Table II

DIRECT INPUT-OUTPUT RATIOS, 1956

(Based on provisional estimates given in Table I).

Purchases by / Sales by	Agriculture, etc. 1	Mining and quarrying 2	Manufactures 3	Building and contg. 4	Gas, electricity and water 5	Other 6
1. Agriculture, forestry, etc.	—	—	0.061	—	—	—
2. Mining and quarrying	0.005	—	0.021	0.026	0.212	0.007
3. Manufactures	0.227	0.106	—	0.298	0.122	0.079
4. Building and Contracting	0.029	0.036	0.007	—	0.011	0.007
5. Gas, electricity and water	0.019	0.018	0.014	0.013	—	0.008
6. Other industries and trade	0.094	0.032	0.107	0.060	0.120	—
7. Imports	0.103	0.008	0.163	0.028	0.006	0.034
8. Wages, profits, etc.	0.530	0.106	0.545	0.564	0.485	0.794
9. Net taxes on expenditures	—0.007	—	0.083	0.011	0.044	0.071
10. Total input	1.000	1.000	1.000	1.000	1.000	1.000

But this is not the only channel along which a change in government expenditure becomes translated into changes in net output. In this example, Other Industries (Sector 6) are shown in Tables I and 2 as buying from Sectors 2, 3, 4 and 5, also a certain amount of imports. By adopting the simple proportional relationship between outputs characteristic of the Leontief production theory, it is possible to trace a series of inter-industry effects on incomes in each of these six sectors.

For instance, for every £ 1.000 of product, Other Industries buy from Manufacturing £ 0.079. A £ 250 millions increase in the output of Sector 6 will thus lead to a £ 0.079 × 250 millions = £ 19¾ millions increase in the output of Sector 3, and to an increase in net output of manufacturing of £mn. 0.079 × 250 × 0.545 = £ 10¾ millions. But this increase in Manufacturing Output has to be taken in conjunction not only with the increase of £ 67 millions originally specified but with all the other derived impacts or indirect demands impinging from inter-related sectors.

4. *Government Purchases and the Matrix Multiplier.*

A more precise way of handling this calculation in general is afforded by the solution of "n" simultaneous linear equations where "n" is the number of sectors, and the ratios in Table 2 are regarded as an "array" or "matrix" of input coefficients. The algebraic properties of the matrix are such as to ensure that all the impacts on incomes of changed levels of output arising from an initially specified final expenditure are taken into account. In other words, the array of input coefficients represents an inter-industry multiplier [8]). To find the total impact on incomes, *sector by sector*, the government expenditures, represented by a column vector have to be multiplied into the inverse of the input-output coefficents, $(1 - A)^{-1}$ or $(1 + A + A^2 + A^3 ..... + A^n)$ and the product has to be multiplied by the row vector of factor input ratios in each of the six sectors.

$$\begin{bmatrix} 1.2 \\ 1.2 \\ 67.0 \\ 15.7 \\ 7.7 \\ 250.0 \end{bmatrix} \times \left(1 - \begin{bmatrix} 0 & 0 & 0.061 & 0 & 0 & 0 \\ 0.005 & 0 & 0.021 & 0.026 & 0.212 & 0.007 \\ 0.227 & 0.106 & 0 & 0.298 & 0.122 & 0.079 \\ 0.029 & 0.036 & 0.007 & 0 & 0.011 & 0.007 \\ 0.019 & 0.018 & 0.014 & 0.013 & 0 & 0.008 \\ 0.094 & 0.032 & 0.107 & 0.060 & 0.120 & 0 \end{bmatrix} \right)^{-1}$$

$$\times \{ 0.530 \quad 0.800 \quad 0.545 \quad 0.564 \quad 0.485 \quad 0.794 \}$$

[8]) See J. S. Chipman, *The Theory of Inter-sectoral Money Flows and Income Formation*, 1951.
R. M. Goodwin, "The Multiplier as Matrix", *Economic Journal*, December, 1949.

The product of this calculation will be the final changes in each of the six sectoral incomes, after the matrix multiplier has had its complete effect, traced from sector to sector via inter-industry input-output ratios, relying on the Leontief production model.

The above model is what is known in technical jargon as an "open-ended model", and this means, in effect, that a once-and-for-all change in final output will bring with it an equivalent change in final input. We wish, however, to indicate how different compositions of government purchases will have different multiplier effects, given the same *aggregate* change in government expenditure on goods and services. Fortunately, it is still possible to state the conditions which will bring this about without involving ourselves in the task of "closing" the model, that is, of tracing the effects of the change in final inputs on the amount and composition of final outputs.

Consider a situation where we ignore the final input of imports from abroad altogether. Our matrix multiplier shows that different compositions of government purchases will produce different distributions of income between occupational groups. It may be that there are no significant differences between the consumption functions for each of the six groups, in which case the methods outlined here would have a restricted value in developing the analysis of government spending. But empirical evidence might show that marginal propensities to save are likely to be different in, say, farming or coal-mining, or in manufacturing compared with building and contracting. To the extent that these differences do exist in reality, the inter-industry analysis should help to demonstrate the differential impacts of government spending on the level of aggregate expenditure.

Once we introduce the complication that final inputs include imports, as well as factor purchases, then we add a further element which strengthens our conclusion that the multiplier effects of a given change in government expenditure on goods and services may vary considerably, depending on their composition. The ratio of imports to inter-industry purchases varies from sector to sector. If government spending is concentrated on a sector or sectors whose "import content" is relatively high, then an obvious extension of multiplier analysis leads one to expect that the impact on incomes (and, therefore, expenditure) will be lessened, since that sector will spend abroad rather more than do others [9]).

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[9]) Apart from the policy implications arising from differing multiplier effects of different compositions of government expenditure of given amount, there are those which follow from the different import patterns themselves. Thus it

5. *Further Considerations.*

Obviously, the above analysis would require to be extended and refined in order to be applied to actual policy situations. Thus one may question the value of exclusive reliance on Leontief-type assumptions regarding the shape of production functions. In analysing multiplier effects, we would have to take account of the structure of taxation, and its effects on the amount and distribution of personal income and expenditure. But these qualifications merely reinforce our general conclusion that the multiplier effects of changes in the levels of government expenditure on goods and services may be extremely complex and that there appears to be a strong case for "disaggregating" expenditures in ways other than that produced by a simple division between expenditure on goods and services, on the one hand, and expenditure on transfers on the other.

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may be of significance from the point of view of policy to translate differing import patterns into differing distributions of demand for foreign exchange, e.g. as between "hard" and "soft" currencies.

POLITIQUE FINANCIERE ET COMPOSITION DES DEPENSES PUBLIQUES

par le Professeur ALAN T. PEACOCK et I. G. STEWART

Le but de cet article est d'indiquer l'importance, pour la politique financière, du fait de considérer les dépenses publiques non pas tant comme une masse homogène mais comme un groupe de dépenses dont la composition peut avoir des effets distincts sur le niveau des dépenses prévues.

Dans la deuxième section, on reconsidère le multiplicateur traditionnel de dépenses sous une forme simplifiée en fonction linéaire de consommation pour les ménages et les dépenses publiques et impôts dont la détermination est d'origine autonome. Sous certaines hypothèses, ce modèle fait ressortir que toute variation donnée dans les dépenses publiques, les dépenses en biens et services, auront un effet multiplicateur plus grand qu'une variation égale dans les transferts de paiements du gouvernement vers le secteur privé. Ceci ne tient nul compte de la redistribution des revenus et ne fait pas la part de la modification du fonctionnement du multiplicateur de dépenses par les flux industriels.

La section 3 démontre, au moyen d'un tableau d'input-output de l'économie britannique en 1956 et des taux d'input dérivés, une méthode valable d'améliorer l'analyse du multiplicateur financier. On l'obtient en portant, industrie par industrie, les effets sur les revenus d'une variation supposée dans les dépenses publiques en biens et services. La section 4 fait progresser l'analyse en introduisant le multiplicateur matriciel dont les propriétés algébriques fournissent un moyen plus rapide — au besoin restrictif — de résoudre les nombreuses équations simultanées que peut entraîner une décomposition des dépenses publiques suivant les industries. Une particularité de cette approche est l'effet différentiel du multiplicateur ainsi qu'entre des secteurs industriels ayant des importances qui diffèrent totalement. On pense que cette approche montrera la voie à d'autres développements qui rendent possible de transférer l'analyse du multiplicateur dans la pratique de la politique financière.

STUDIES IN FINANCE AND DEVELOPMENT — THE GOLD COAST (GHANA) EXPERIENCE 1914—1918

by N. A. COX-GEORGE

Fourah Bay College (Durham University) Sierra Leone.

PART I

AN EXPORT ECONOMY AT WAR 1914-1918

External Trade.

During the first decade of the 20th Century the Gold Coast decisively developed into an export economy. There had been a slow progression towards that position since about 1874 when the British assumed full control of the coastal strip by annexing it as the Gold Coast Colony *). This onward trend was punctuated by the shocks of the country-wide agitation over the land issue which gathered momentum in the 1890's and the troubles in Ashanti — inspired by the international rivalries of the period — which led to the deportation of the Asantehene Prempeh I in 1898. With the settlement of these issues, with the establishment of the Pax Britannica and with the successful introduction and culture of cacao in the meanwhile, the pace was well set for the Gold Coast to become an export economy of some significance. The external trade of the dependency continued to grow in the years before 1914 bringing with it an appearance of prosperity to the country. Naturally, in the context of an underdeveloped country depending on sylvan products, the exports fluctuated widely during those years. But by 1914 cacao was coming to assume a position of dominance among exports. In 1895, for instance, the chief exports (and their value) were rubber (£ 332,000), gold dust (£ 91,000), palm oil and palm kernels (£ 308,000), and kola-nuts (£ 30,000). In 1899 714,000 lbs of cacao [1]) were exported valued at £ 16,000, rubber exports were £ 550,000, gold and gold dust £ 51,000 but palm oil and palm kernels held their places. Thereafter, the rubber trade fluctuated and finally declined chiefly because of the competition of

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[1]) Cacao first figured in the export-list in 1891 when 80 lbs were exported. Vide, A. W. Cardinal: The Gold Coast 1931 p. 83.

*) This territory has since March 6, 1957 become an independant sovereign state under the name Ghana.

plantation rubber from South-east Asia and Indonesia. Timber was added to the list, and with the adoption of modern methods and railway facilities, the gold-mining industry revided. For a time gold and cacao became rivals as the two chief exports (cacao, £ 866,000; and gold, £ 790,000 in 1910) with kola-nuts progressing and palm oil exports tending to fall off [2]). Cacao, however, rapidly outdistanced gold and by 1913 the value of cacao exported was £ 2,523,762 (being 49.65% of total exports) and that of gold £ 1,659,435.

The war of 1914-1918 seemed to have given a stimulus to this seeming prosperity and upward movement in the export sector of the economy. The following are the figures of the changes in the value of the external trade of the territory:

VALUE OF EXTERNAL TRADE (£)

Year	Exports	Imports	Total
1913	5,427,106	3,510,413	8,973,519
1914	4,942,652	3,583,758	8,526,414
1915	5,493,630	4,509,538	10,453,168
1916	5,816,528	3,591,107	9,676,635
1917	6,364,925	3,386,480	9,741,400
1918	2,641,927	2,919,915	5,561,842

Further analysis reveals that this apparent prosperity is illusory. The average value of exports over the years was £ 5,141,933. This reflects that, for all the seeming boom in the years 1915 to 1917, the overall effect of the war on the export sector was depressional. This fact is brought out in bolder relief in the volumetric indices of the movement of trade given below:

VOLUME OR TRADE
(1913 = 100)

Year	Imports	Exports	Total
1914	117.41	92.27	106.17
1915	81.25	85.05	82.98
1916	87.5	93.93	90.37
1917	51.79	112.15	78.77
1918	35.27	82.32	56.3

[2]) Encyclopaedia Britannica 1953 Edn. Vol. 10 p. 488.

This affords conclusive proof that, in real terms, the external sector of the economy was depressed.

One outstanding feature of the external trade of the period was the fact that cacao came to assume the premier place among the articles of exports and, despite all the set-backs of war-time, its volume showed a continued expansion. The trend of the volume of cacao exports during these years being:

Year	Tonnage	Index
1913	47,554	100
1914	55,888	117.52
1915	77,278	162.53
1916	72,161	151.75
1917	90,964	191.29
1918	66,343	139.51

and whereas in 1913 the value of cacao exports was 49.65% of the value of total domestic exports of the Gold Coast, in 1914 it was 49.19% rising in 1915 to 62.95% and reaching the height of 69.19% the following year. There appeared to have been a slight set-back in 1917 and 1918 due to many factors prominent among which there was, first of all, the increase in the value of certain other imports chiefly kola-nuts, lumber and manganese; then there was the drastic fall in cacao prices which was itself associated with the export duty on cacao; and the shipping bottleneck. In actual fact, however, cacao exports increased, in absolute terms, by over 43,000 tons (1917) and 18,000 tons (1918) above the pre-war level.

It is not unlikely that this may be reflective of a familiar feature which some economists have described as the *perverse elasticity of supply* of agricultural and sylvan products. The average annual price of cacao fell from £ 61.5 per ton in 1913 to £ 50 in 1914 then to £ 46 in 1915 to just over £ 34.5 in 1917 after a slight recovery to just over £ 53 in 1916. Nor was this all. From time to time, there were violent price fluctuations in between short periods. The price of a ton of cacao in March 1914 was £ 55. By June of that year it had dropped to £ 51 and in October of that very year it had sunk to £ 44. Thereafter prices rocketted to £ 77 per ton in April 1915 declining rapidly to £ 53 in June 1915 but recovering to £ 70 in December. In April 1916 it had moved to £ 67 and by July of that year it had again fallen to £ 48 [3]). And in December of 1916

[3]) Legislative Council Debates (Colonial Secretary) 21 Nov., 1917 p. 137.

the price per load (60 lbs) rocketted downwards from 18/- or 19/- to barely 5/- [4]).

Another outstanding feature — and possibly one of the most decisive factors contributing to the depression in the export sector of the economy — was the shipping bottleneck. The following table clearly reveals that the shipping bottleneck became tighter and tighter as the war proceeded; and from 1915 onwards American sailing bottoms [5]) became a familiar sight on the 'sounds' of the Gold Coast and exceedingly so with each succeeding year. They came to take advantage of the shortage of steam vessels occasioned by war. What is more the table exhibited a perfect correlation between the volume of imports and the tonnage of ships 'cleared' and between the volume of exports and the tonnage of ships 'entered'.

Another remarkable fact is that although the value of imports rose up to 1916 above the pre-war level and fell slightly in 1917 and more so in 1918, the volume of imports showed a considerable continuous decline throughout the war years. One clear inference of this is that the appreciation in the values of imports was an indication of "cost inflation" and that inflation was imported into the economy via imports. Another clear inference is that imports too suffered from the shipping bottleneck.

The Internal Conditions of the Economy.

While the external trade of the colony suffered from a depression during these years, there was a boom in internal business activity at the same time. It is difficult, in the extreme, to obtain a direct index of the movement in internal business activity. There are none of the conventional indices of the internal market from which to derive them. Here in this study reliance has been placed rather on a substitutive index which is reproduced below. This index is based on data which are readily obtainable about the internal currency movements. That makes the index itself essentially an index of the volume of internal business transactions or the flow of funds in pursuit of such transactions — which is as rough and ready a means as any we can have of feeling the throb of the pulse of business in the internal market economy.

The precise manner by which both the government and the large commercial firms effected remittances within the territory at this time is not known. Since the establishment of the Bank of British

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[4]) Legislative Council Debates (Hon. J. D. McKay) 21 Nov., 1917 p. 107.
[5]) Legislative Council Debates 1915-16 pp. 11/12

SHIPPING

Year	Entered			Cleared		
	Nos.		Tonnage	Nos.		Tonnage
1913	Steam 692 Sail 1	693	1,515,197 851 — 1,516,048		678 —	1,470,505
1914	Steam	637	1,413,009		629	1,398,265
1915	Steam 354 Sail 8	362	818,356 7,259 — 825,615	Steam 342 Sail 3	347	799,213 3,870 — 893,083
1916	Steam 340 Sail 20	360	766,315 16,331 — 782,646	Steam 344 Sail 14	358	770,547 12,065 — 782,612
1917	Steam 313 Sail 23	336	705,584 16,902 — 722,486	Steam 309 Sail 22	331	707,239 12,620 — 724,859
1918	Steam 210 Sail 46	256	488,366 50,819 — 549,185	Steam 211 Sail 42	253	495,628 46,864 — 542,492

Sources: Trade Reports.

West Africa in the Gold Coast on New Year's Day 1897, the practice seems to have grown up for government to effect its remittances increasingly through the bank by use of cheque. All receipts on account of government not less than £ 2 were paid by cheque on the bank. In addition, small imprests were usually kept in the Provincial centres. It is not unlikely that a similar practice was followed by the larger firms. By 1913, the bank had 10 offices (5 branches and 5 agencies) opened in the main administrative centres of the Colony[6]). For the smaller business-men (which mainly comprised the middlemen) remittances at this period largely assumed the form of transfers of Money Orders and Postal Orders. Although Money Orders were to a considerable extent used for payment of goods imported by parcel post, the security afforded by Money Order remittances was known to induce greater employment of its facilities for transfer of money within the Colony particularly between the towns served by Money Order offices[7]). This was decidedly the case even with Togoland and Dahomey after the conquest of these places and the consequent extension of money order facilities to them[8]). At the same time, Postal Orders were also increasingly being used as a means of transmitting money by the African community. The Posts and Telegraphs Department Report for 1913 noted "It is not an uncommon occurrence at outstations for native traders to buy up the whole stock of Postal Orders to the extent of £ 100 or more rather than run the risk of being robbed of coin when returning to the coast towns" pointing out at the same time that "during the last 5 years Postal Order business has nearly doubled in value"[9]). The ideal thing would seem to be to take the internal circulation of both Postal Orders and Money Orders as a basis for our substitutive index. Fortunately, during these years the official records give us detailed information of, or from which can be derived, the values of the Postal Orders and Money Orders that 'circulated' internally in the Colony. A supplementary source of information which is available is the record of the values of inland telegrams transmitted during those years. This was so since pre-payment was made for telegrams by means of stamps the values of which were tabulated. Since, however, government expenditure on telegrams were included, and since the exigencies of the war magnified such government expenditure on inland telegrams — especially if Togoland and Dahomey were

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[6]) Blue Book 1913 (ADM 7/47) p.w. 3.
[7]) cf. Posts & Telegraphs Dept. Report 1916 - ADM 5/263 pp. (8) & (9).
[8]) cf. Posts & Telegraphs Dept. Report 1918 - ADM 5/265 p. 7.
[9]) Posts & Telegraphs Dept. Report 1913 - ADMS 5/260 p. (8).

included — the significance of this datum is doubtful. Consequently, in the table that follows the index which includes the value of inland telegrams has been separated from that which is derived purely from Postal Orders and Money Orders. That, however, seems to make very little or no material difference to the indices and the trend of movements of internal business activity is the same.

SUBSTITUVE INDEX OF INTERNAL BUSINESS ACTIVITY.

Year	Value of M.O. Translated (£) (1)	P. 00 (Internal Paid (£)) (2)	Total (£) (1) & (2) (3)	Index Based on (3) (4)	Stamps on Inland Teleg-rame (£) (5)	Total Based on (3) & (5) (6)	Index Based on (6)
1913	26,826	51,825	76,651	100	6,291	85942	100
1914	33,630	53,649	87,279	112.4	6,327	93606	110.
1915	46,503	59,139	105,642	136.04	7,545	113187	133.
1916	63,540	65,936	129,456	166.7	10,543	139999	164.
1918	68,857	65,356	134,213	174.1	11,816	146029	171.
1919	64,197	53,743	117,940	151.8	18,497	136437	158.

It is doubtful to what extent this reflects a genuine net increase in internal business activity since the number of Post Office branches was growing at the same time. In 1913 there were 17 branches of the Post Office in the country. From 1914 to 1918 the numbers in the respective years were 19, 26, 27, 28 and 32. By then a money economy was already well established [10]). The index might justifiably reflect *flows* of money in the economy. In the circumstances — and from the broad indications given elsewhere in the economy and which is discussed elsewhere in this paper — the index might be regarded as a rough guide to the trends in the internal market of the economy. The impact of the war created something like a mild boom in the internal sector of the economy which gathered considerable strength throughout the rest of the period.

Partly as a result of the scarcity of imported goods occasioned

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[10]) The 1913 Blue Book notes that even the traditional „cowries were very littled used and only amongst the lower classes in the market places" but even by then a money economy was so well astablished that the cowries were reckoned in terms of definitive money of "a shilling — "40 cowries being equal to a 'string' and 50 'strings' or 2,000 cowries to a 'head'. $12^1/_2$ strings are equal to 3d 50 strings or a 'head' of cowries to one shilling."
— Blue Book ADM. 7/47 p.w.2.

by the shipping bottleneck and the loss of imports from 'enemy' sources, partly as a result of the 'cost-inflation' generated by the impact of war, there was not only intensified efforts to produce more foodstuffs but increased trafficking and distribution of these products as well. The table that follows indicates the tonnage of domestic produce carried on the railways in these years.

TABLE OF NATIVE PRODUCE CARRIED ON RAILWAYS

Goods	1913	1914	1915	1916	1917	1918
Corn & Maize	1,425	1,975	1,729	1,385	2,657	1,741
Native Fish	3,023	2,550	2,925	2,209	2,770	1,383
Firewood	66,433	80,304	99,007	122,640	134,289	139,693
Native Produce (staples)	7,946	10,616	15,885	11,614	16,027	26,728
Timber	935	792	807	570	1,573	3,262
Total	79,762	96,237	120,353	138,418	157,316	172,807
Total without Timber	78,827	95,445	119,546	137,840	155,743	169,545

Source: Railway Departmental Reports.

Although the railway mileage was increasing for at least part of the time, the table affords clear evidence of a continuous increase in the distribution — if not in the production — of domestic produce for domestic consumption. Even in the years 1917 and 1918 when railway mileage did not increase, the volume of domestic produce carried on the railways increased considerably. This table, however, does not take into account changes in the volume of waterborne traffic. Indeed, it is probable, though no precise information is available, that after the campaigns in Togoland and Dahomey the security of local maritime traffic was so well established that waterborne traffic equally increased.

In the case of foodstuffs, there is clear evidence that it was the war and its inevitable shipping bottleneck which induced the increased activities on the railways. If the food items (exclusive of 'Native fish') were abstracted from the above table, the annual aggregates show a perfectly negative correlation with the volumes of imported provisions. That is to say, whenever the volume of imported provisions declines the traffic in domestic foodstuffs goes up and *vice versa* [11]).

[11]) Vide R. Higham, Chief Traffic Officer's observation in Railway Department Report 1919 ADM. 5/266 p. 37.

Year	Total Imported Foodstuffs (Tons)	Total Native Grown Food carried on Railway (Tons)
1914	10,658	12,591
1915	9,862	17,614
1916	10,187	12,999
1917	5,241	18,684
1918	2,085	28,469
1919	5,959	17,395

It was not a question of carrying capacity of the railways at all. It was rather the response of the market to the stimulation of demand.

On the outbreak of the war the Gold Coast Regiment was constituted an expeditionary force which made the onslaught on Togoland and Dahomey. The first contigent which went out was some 1,000 strong but from time to time their numbers were reinforced. After the Togoland campaign they were drafted into the Cameroons and East African campaigns. In 1916 a training depot was set up somewhere in East Africa and in September of that year the first reinforcement draft of " 100 and more" was sent out there for training. Similar recruits were sent out to East Africa, from time to time, till the end of hostilities [12]). From December 1916 there was an intensified recruitment drive. It is difficult to know the precise numbers diverted in this way to those theatres of active combat. But by October 1915 some 1,550 officers and men from the Gold Coast Regiment had gone out with the Expeditionary Forces [13]), and in 1918 the Governor stated that „they went out 1,000 strong and that they never numbered more than 3.250 at any one time and ..... that apart from their casualties in killed, wounded and missing 837 either died of disease of were invalided" [14]). If we assume that the "casualties in killed, wounded and missing" were in the neighbourhood of another 3,000 then the total numbers so diverted would be just over 7,000 men.

Considering the selectivity of military recruitment, a good number of the able-bodied active producers were diverted to the armed forces. This, in turn, must have intensified the necessity for provi-

[12]) Legislative Council Debates 1916-1917 (Colonial Secretary) 26/9/1916 p. 111.

[13]) Governor's Address in Leg. Co. Debates 25/10/1915 p. 5.

[14]) Governor's Address in Leg. Co. Debates 28/10/1918 p. 15.

sioning such an unusually large 'native' force, on the one hand, and the demands both for home-produced foodstuffs and for imported provisions, on the other hand. When it is recalled that 90% of these men came from the Northern Territories [15]) — the most significant source of the migrant agricultural labour force of the Gold Coast — the two-fold significance of this diversion becomes all the more evident. On the one hand, more and more men were displaced from the land into the combatant services thus creating an intense demand for the very products of agriculture particularly foodstuffs. On the other hand, the response of supply to this demand is rendered extremely slow and difficult because of the depletion of the able-bodied and skilled elements in the ranks of the agricultural labour force. A condition of relative scarcity of these products is created which naturally must lead to some increase in prices.

One aspect of the effects of this man-power diversion is revealed in the table given below:

AFRICAN MINE LABOURERS [1])

	Ex Gold Coast	Ex Other British Depenencies	Ex Foreign Countries	Total
1913	11,318	2,266	2,515	16,099
1914	11,735	2,475	3,159	17,369
1915	10,548	2,716	4,083	17,347
1916	9,767	2,611	4,779	17,157
1917	10,751	3,088	5,477	19,310
1918	9,625	3,007	4,756	17,388
Ave. 1914/ 1918	10,485	2,779	4,126	17,445

[1]) Source R. R. Kuczinski: Demographic Survey of the British Colonial Empire. Vol. I, West Africa p. 426.

Although the African mining labour force increased considerably during these years, the Gold Coast labour employed on the mines in 1913 was 11,318, the average volume in the years 1914-1918 was 10,485. So that the increase in the total volume of mine labour was entirely at the expense of sources outside the Gold Coast. This table also gives clear indication of another feature of the internal conditions of the economy. Outside agriculture (and particularly of cacao), mining was the most important economic activity in the

[15]) Ibid.

Colony[16]). The fact that African employment increased during these years goes to show that much new income was generated in the economy, and although the new income-earners were 'foreigners', part at least of this new income was spent in the Colony exerting additional pressure on demand within it.

Paralleled with the increase in internal business activity and, possibly a factor in the determination of that increase in internal business activity, was the stupendous growth in the volume of the circulating media. This is clearly demonstrated in the following table of the estimated currency circulation in those years.

	Aggregate Currency in Circulation (£) (Estimated)	
1913	402,967	
1914	463,750	
1915	1,014,787	
1916	1,210,042	
1917	1,414,837	
1918	2,171,237	(2,221,237

N.B. The bracketted figures include British Treasury Notes estimated to be in circulation in the Colony.

There was clearly a continuous growth in the size by the active money or currency supply throughout the period and by the end of the war the currency in circulation was more than five times that in circulation in 1913. In the psychological climate of the period this must have been accompanied by an accelerated 'velocity of circulation' as well. Hence, there must have meen considerable inflationery pressure on the economy. In the conditions of an under-

[16]) The value of mineral exports as compared with Cacao exports and total exports in these years being:

	Mineral	Cacao	Total
	£	£	£
1913	1,659,435	2,489,218	5,427,106
1914	1,755,552	2,193,749	4,942,652
1915	1,207,033	3,651,341	5,943,630
1916	1,766,182	3,847,720	5,816,528
1917	1,420,686	3,146,851	6,364,925
1918	1,475,568	1,796,985	2,641,927

developed economy such as the Gold Coast's then was there can be not doubt there was a considerable degree of active inflation in the economy.

It is difficult, in the extreme, to tell whether there was any economic progress during this period. Globally, that is impossible [17]). Distributively, only in a limited number of sectors is it possible to trace signs of progress. We have already seen how although the volume of exports declined, that of the principal agricultural export, cacao, increased. In this sector, there was decidedly increased output despite the fact that not all of it was economically utilised. With the virgin conditions under which cacao cultivation was inspired in the earlier part of the century and with the buoyant market conditions this crop enjoyed prior to and up to 1914, a great stimulus was given to *extensive* cacao farming. So that the stage was well set for increased cacao production during the war years. As the harvest season is from October to December, a considerable part of the exports of one calendar year must inevitably be carried over from the previous calendar year's crop. Consequently, the volume of shipment in one year is not a true guide of total crop production the trend of which must rather be correlated with the trend of cultivation in previous years. During the period, the precipituous drops in prices, the shipping bottleneck and the difficulties of internal transport together 'conspired' to damper the activities of the cocoa farmers. In those years "a considerable part of the crop was never gathered and a large quantity after gathering and preparing had to be destroyed." One estimate in 1917-1918 indicated that „not more than three-fourths of the crop was collected and only one-half sold [18]). Cacao, the chief agricultural export increased although exports did not reflect the country's optimum productive capacity. The chief limiting factor was the transport bottleneck — both internal and external. All the other agricultural export crops declined except kola-nuts and rubber. In the case of the former the primary trade channel was through the northern overland boundaries to the French Sudan and to Nigeria. With the exception of 1916 when there was a decline [19]) kola-nuts exports showed a

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17) No attempt was made before Cardinal's futile attempt (vide A. W. Cardinal: The Gold Coast 1931 pp. 120/122) to estimate the National Income of the Gold Coast in 1930.

18) Agricultural Department Report 1918 - ADM 5/264 p. (11).

19) This decline was believed to have been induced by the export duty imposed on the Gold Coast and the high import duty simultaneously imposed in Nigeria. It is not improbable that it was affected by the scarcity of labour caused by recruitement of the best Nothern Territories poterage labour.

continuous upward movement. All the other agricultural export products declined. The Priority of shipping space accorded oleaginous products could not induce an increase in the output of palm kernel and palm oil. These declined throughout [20]). Similarly, in the non-agricultural sector of exports both lumber and gold declined. In 1915, however, manganese began to be exported. Since this was a strategic material essential for war its exports continued to grow although by the end of the war the increase was still modest the total export being only about 33,000 tons.

There are equally no realiable indicators of growth in the subsistence sector. The table given above about domestic produce carried on the railways indicates that there was increased trafficking in such produce on the railways but it affords no evidence of increased production. The production might have been there but might not have entered the circle of exchange had not the scarcity of imported provisions etc. created an internal market demand for them. In other words, the increased traffic might have been at the expense of producer's subsistence. In the case of foodstuffs, the close negative correlation between imports and railway traffic in these foodstuffs strongly suggests that this was so. Otherwise, a time-lag between the shortage of imports and the increase of domestic produce — as a reaction of the farmers — must be allowed for. There appears to be no such time-lag. On the other hand, with the inflation in the economy a stimulus should have been administered to subsistence production especially as cacao prices were on the downward trend. It is, however, doubtful that with the well organized middleman system which operated on the Gold Coast whether the increase in prices did not serve merely to enrich the middleman rather than stimulate the farmers to more productive activity [21]).

An inflationary period might conduce to capital formation. But in the conditions of the Gold Coast at that time, it is extremely difficult to obtain evidence of capital formation in the private sector of the economy and such evidence as there was of capital formation

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[20]) This is largely due to the fact that in the more buoyant days of cacao these other products were neglected. Vide, e.g., Agricultural Department Report 1914 - ADM 5/262 p. 14.

[21]) The Governor similary feared that in the case of exported cacao though the "high figures which represent the value of our exports during the years 1915, 1916 and 1917 indicate that very large quantities have been shipped, but that the farmer has received much less money for his crops than was the case before the war."
— Legislative Council Debates 1918-1919 pp. 47/48.

is very slender indeed. Although a money economy had by now grown up the habit of institutional saving was hardly yet developed. The Bank of British West Africa, Limited, was established in 1897 ten years after the Post Office Savings Bank had been set up and is was not till some twenty years later, in 1917, that the "Colonial Bank" (later Barclays Bank, Dominion Colonial and Overseas) first opened branches in Accra and Secondee. Up to this time, the commercial banks served merely as bankers to the Government and to the large commercial enterprises. They were very little used by the general public at large. The Post Office Savings Bank was more widely used and has continued to expand. In 1913 there were, on the whole, some 13 branches of the Post Office Savings Bank with 4,334 total depositors. In the following years this grew to 19, 26, 27, 28 and 32 branches with 5,593; 5,107; 5,834; 5,905; and 5,816 depositors respectively. About the only figures of savings readily available are those made through the Post Office Bank which were as follows:

1913	—	£ 45,312
1914	—	£ 51,898
1915	—	£ 55,613
1916	—	£ 61,420
1917	—	£ 57,757
1918	—	£ 52,114

These figures are exclusive of possible savings accumulated through Bank of British West Africa, Limited, and through the 'Colonial Bank'. They clearly show that apart from the fact that the increase in savings bank facilities helped more persons to effect savings institutionally, savings increased continuously up to 1916 and then declined in 1917 and 1918. A possible explanation being that by 1916 the amplitude of the inflationary wave was so widened that people were beginning to eat into savings to maintain consumption. This indicates some possibilities of capital formation. But in the conditions of the economy institutional savings did not appear to be of much sgnificance. Owing to the overvaluation of silver relatively to currency notes Gresham's principle seemed to have operated to stimulate the hoarding of silver [22]). Nana Ofori Atta doubted the truth of the theory that silver was being hoarded but we have it on his testimony that instead the native of the country or he farmer uses his money "in building houses and making his position more respectable" [23]). Some evidence of this can be gleaned

22) Acting Colonial Secretary in answer to question put by Nana Ofori Atta in Legislative Council Debates 30th June, 1919 pp. 358/9.

23) Legislative Council Debates 30th June, 1919 p. 393.

from the changes in the annual assessed value of immovable property in the municipalities if regard is had of the fact that the municipalities embraced only a tiny fraction of the Gold Coast. There were only three municipalities at this time, namely, Accra, Cape Coast, and Secondee. The total assessed value of property in the years were:

1913	—	£ 91,006
1914	—	£ 98,379
1915	—	£ 98,349 [1])
1916	—	£ 91,902 [1])
1917	—	£ 91,798 [1])
1918	—	£ 128,842 [1])
1919	—	£ 128,842 [1])
1920	—	£ 132,441 [1])

[1]) Exclusive of value of property in Accra which is not available for these years. Ex Blue Books.

There is undoubted corroboration of Nana Ofori Atta's testimony here so far as the municipalities are concerned and we may accept it to be true for the vast non-municipal areas as well.

PART II

FINANCE AND DEVELOPMENT IN WAR-TIME 1914-1918

The response of the Gold Coast Government to the challenge of war was prompt and decisive. In August 1914 an expeditionary force was sent out to undertake the invasion of Togoland. This, naturally, involved the government in extraordinary (unforeseen) war expenditure. That amounted to nearly £ 60,000 [24]). At the same time the government also specially voted the sum of £ 80,000 as war contribution to the Imperial Government [25]). These committments brought considerable disturbance to a budget already saddled with some £ 6,000 additional expenditure in respect of increases of salaries of "the whole native subordinate service" as from 1st January 1914 and another £ 10,000 in respect of salary increases of the "European Staff" beginning a year later [26]). The financial situation was, therefore, complicated from the onset of the war. It was further aggravated, from time to time during the war, not

[24]) Legislative Council Debates 25/10/1915 p. 9.
[25]) Legislative Council Debates 26/11/1916 p. 71
[26]) Legislative Council Debates 30/10/1916 (Colonial Secretary) p. 262.

only by the vicissitudes of trade but also by the inflationary situation and the further increases in allowances and bonuses allegedly granted to help counter the effects of the inflation. Thus in 1916 a 10% increase in *duty allowances* (now known as expatriation or overseas allowance) was granted to those civil servants with salaries below £ 400 per annum [27]) and twice in 1918 — before the cessation of hostilities — war bonuses were granted to all officers both European and African including members of the fighting services. In August 1918 a bonus was paid to those earning less than £ 350 *per annum* with effect from 1st October 1916. This was intended to indemnify them against the high cost of living which had been prevailing up to that time [28]). Prior to that in May 1918 a general war-bonus was awarded to all as from the beginning of the year. This entailed an additional cost of some £ 32,000 to the Government [29]). Incidentally, while these bonuses were meant to alleviate the sufferings of a class under the lash of inflation they, non-the-less, must have reinforced the strength of the inflation itself.

The financial situation was further complicated by the fact that since the commencement of his administration in 1912, Sir Hugh Clifford had set the ship of his *Surplus Balances Development Programme* in full steam. This made financial manipulation rather uneasy. The immediate difficulties of 1914 were largely met by advancing a considerable amount from surplus balances for "loan expenditure" which was made good when the loan was floated later in the year [30]) and by pruning the development programme itself. Apropos the war contribution of £ 80,000 sympathy with the financial position of the Colony induced the Secretary of State to "suggest that it should be replaced by an annuity for, say, ten or fifteen years equivalent to an immediate payment of the original amount contemplated". The acceptance of this principle reduced the immediate contribution to the modest dimension of £ 10,000 [31]).

In 1915, however, despite the revival of exports, the slump in imports tended to reinforce the financial troubles of the Colony and the need for increased revenue became urgent. By then, it had also become clear to the Secretary of State for the Colonies that during the war and for some time in the post-war period the Crown Agent for the Colonies will neither be able to place Colonial loans on the London Market nor to make temporary advances to the

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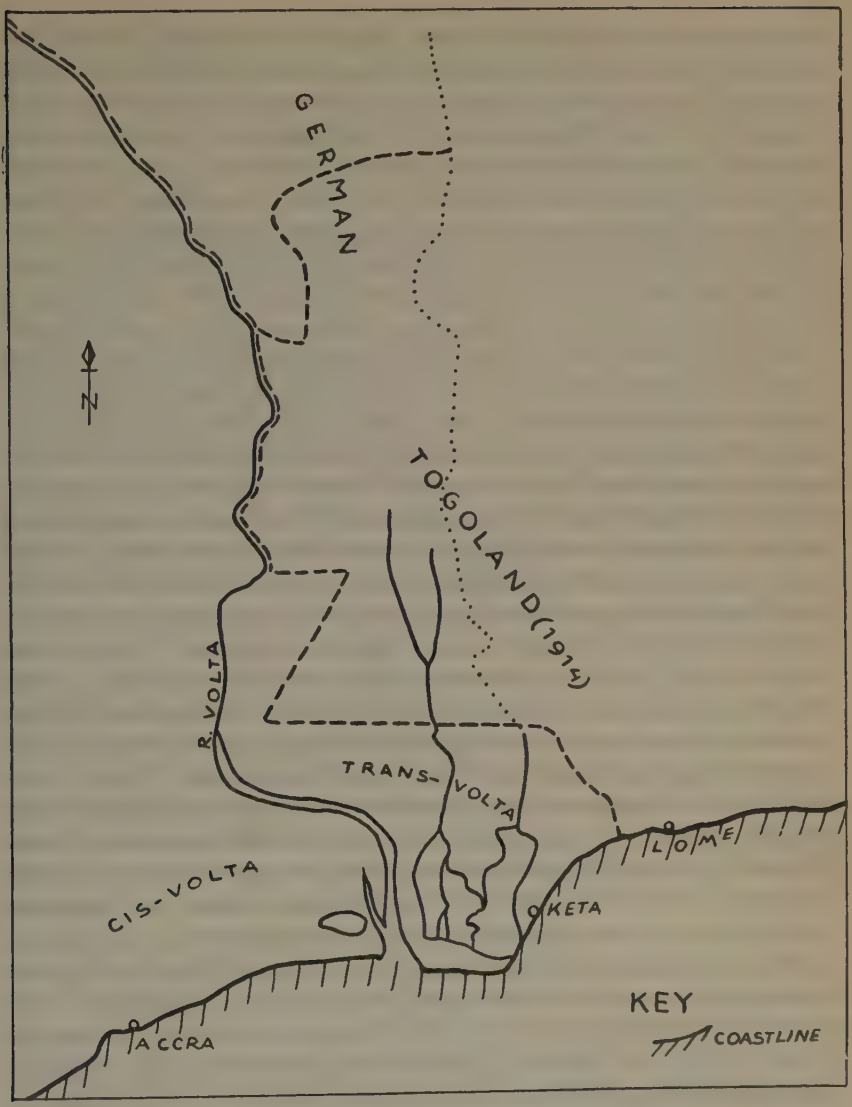
27) Legislative Council Debates 30/10/1916 p. 220.
28) Legislative Council Debates 19/8/1918 p. 254.
29) Legislative Council Debates 27/5/1918 pp. 251/2.
30) Legislative Council Debates 25/11/1914 pp. 131/2.
31) Legislative Council Debates 25/10/1915 p. 10.

Colonies as was the pre-war practice. The Secretary of State, therefore, determined that is was necessary to keep a floating balance of between £ 70,000 and £ 150,000 on hand and accordingly instructed the Gold Coast government to maintain a floating balance at the level of the latter figure. This meant that an additional surplus revenue was called for in 1915 over and above the surplus of £ 26,000 which had already been budgetted for in 1915 and the — surplus of £ 42,000 in the 1914 budget. Since it had been decided not to cut down the programme of public works development — which had already been prunned to a minimum the year before — increased taxation became necessary. The increased taxation assumed the aspect of a two-way increase in customs duties. Firstly, there were increases of duties on certain articles which were consumed all over the country. These included spirits, tobacco, wines, matches and salt. Secondly, there were increases resulting from the policy of assimilation of customs duties east and west of the Volta. In other words, the duties east of the Volta were raised to the level of those west of the river. Since this policy of assimilation carried with it implications of equity there is, perhaps, some justification for treating it at some length.

The *status quo ante bellum* was this. With the object of making the area east of the Volta river a sort of 'buffer state' between German Togoland and the mainland of the Gold Coast, the duties in that region had been established on a lower level than those prevailing west of the river. Whereas the *ad valorem* rate of duties in Togoland had been 12½%, that in the Cis-Volta area (that is, the area west of the Volta) was 10% but that at Keta (Quittah) on the British Trans-Volta *buffer* was fixed at 4%. The reason given for this discrepancy was that is was deemed desirable policy to stimulate British trade in the Trans-Volta area. "Owing to the greater facilities for landing goods at Lome and the excellent means of communication which exist on the border between Togoland and Quitta (Keta) the German merchants had an advantage which it is difficult to combat in some way and the method chosen was the reduction of the *ad valorem* duty in Quittah (Keta) ..... and a similar reduction in some of the specific duties." Rather than this leading to lower competitive prices for the commodities involved in Trans-Volta, prices were practically the same as in Cis-Volta. The same was true for the goods subjected to specific duties. For example, enquiries made by the government in May 1913 revealed the fact that "The price of kerosene at Addah was 10/6d a case of 8 gallons, at Quittah (Keta) 10/- a case and at Lomé 12/6d a case the respective duties at those places being at Addah 2/- a case, at



Quittah (Keta) 2 d a case and at Lome 2/- a case. In other words, although the duty on a case was at Addah and Lome twelve times as high at Quittah (Keta) there was only a difference of 6 d in the price as between Addah and Quittah (Keta) and Lome. This shows that so far from the consumer deriving any benefit from the lower rate of duty in force in Trans-Volta the merchants must have been making considerable profits" [32]). Only in the case of

[32]) Legislative Council Debates 16/3/1915 pp. 94/5 (Colonial Secretary).

tobacco and spirits did differences appear. In the case of tobacco with the higher rate of duty in Togoland and Trans-Volta as compared with Cis-Volta, the price was lower in the former place than in the latter. With spirits both the duty and the prices were lower in Trans-Volta as compared with Cis-Volta. This is largely, of course, to be accounted for by the easy accessibility of large supplies of cheap German spirits. The tariff of Trans-Volta was now assimilated to that of Cis-Volta and the rest of the Gold Coast. The primary intention — in the financial stress of the year 1915 — was to increase revenue by stepping up the rate of duties in Trans-Volta to the level of the rate elsewhere in the Gold Coast sphere. It was hoped that this would be done at the expense of the profit margins of the merchants in the Trans-Volta area. How far was that justified it is difficult to say. This much can be said. Since the region of the River Volta between Trans-Volta and Cis-Volta is navigable the conquest of Togoland and its subsequent occupation created favourable conditions for such tariff assimilation. Since Lomé was now in British hands a uniform tariff can be effective from Lomé in the east to the borders of French Ivory Coast on the West. The preventive Services on the banks of the Volta in the region will no longer be necessary. That would, in the first place, effect economies in administration. It will, in the next place, afford a good medium for the promotion of internal goods-traffic and by attracting merchandise trade from Cis-Volta to the Trans-Volta area render competition more effective and so tend to equalize profit margins as between merchants operating in the respective areas. The policy of tariff assimilation, therefore, though conceived in the interest of increasing revenue, carried implications of economic development and of distributive justice particularly in the Trans-Volta area. We should, however, not lose sight of the fact that its primary and more immediate aim was to increase revenue. The other device to raise revenue was an increase in customs duties on certain articles of general consumption throughout the territory. These covered a 24% increase in spirits and a $33\frac{1}{3}$% increase in the duties on still wines — champagne because of its negligible consumption being left untouched. The duty on unmanufactured tobacco was increased by $33\frac{1}{3}$% and that on cigarettes was raised 100%. Similarly, the specific duty on matches was raised by 1200%, salt 480%, on rifles 100%, flintlock guns and pistols 150% and sporting rifles, revolvers and pistols 200%.

These increases were estimated to yield an extra revenue running at the rate of over £ 145,000 *per annum* and for the last three-quarters of 1915 during which they would be effective well over

£ 100,000. Almost immediately, new financial troubles appeared hydra-like. A railway liability which had been unprovided for in the Estimates suddenly appeared. That amounted to some £ 195,000. The immediate consequence of this revelation was that the anticipated budget surplus was at once transformed into a deficit. To meet this contigency, four measures were resorted to, namely

(1) to postpone indefinitely the war contribution of £ 80,000.
(2) to cut down the Public Works Extraordinary vote by some £ 55,000
(3) to discontinue the Northern Railway construction thus releasing some £ 20,000 and
(4) to increase Railway rates all round by 15%.

The first three measures involved a policy of retrenchment and only (4) involved increased taxation. At the time it was estimated to yield some £ 30,000. But in October 1915 the Secretary of State for the Colonies instructed the resumption of the construction of the Northern Railways on the basis of additional funds being provided within the Colony itself. For this purpose additional taxation in the form of a 2½% increase in *ad valorem* duty was imposed together with a 100% increase in telegraph charges.

In 1916 the government was further committed by the increase of war contribution (which had been suspended the year before) to £ 200,000. Consequently, additional taxation once again became necessary. This additional taxation now assumed three forms. There was, first of all, an export duty imposed on cacao. Secondly, railway rates for the carriage of cacao on the Sekondi-Kumasi line were increased [33]). Finally, court fees were also increased. This was

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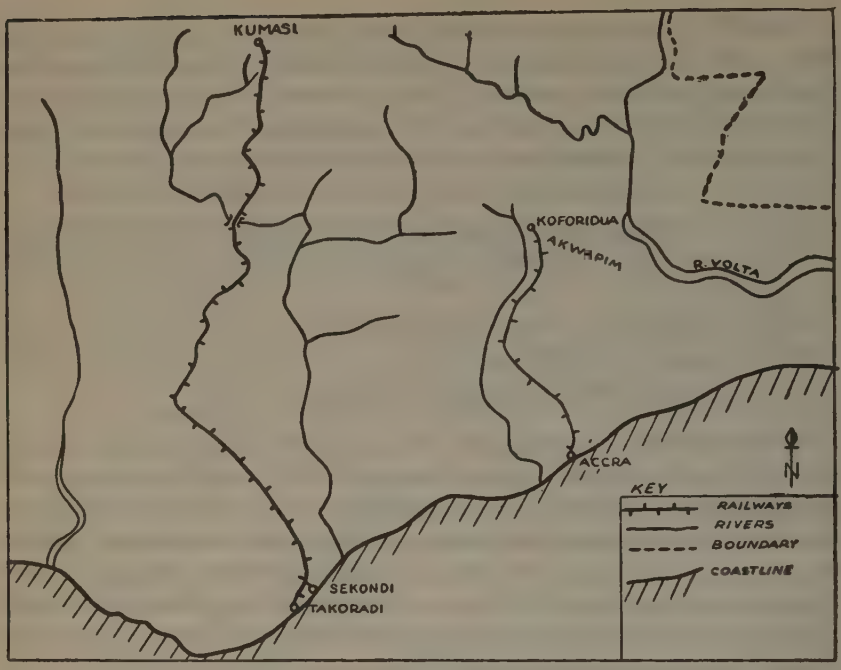
[33]) Up to that time and in order to encourage the cacao industry in the South Western Province a differential freight rate for the carrying of cacao on the two lines prevailed — the Sekondi-Kumasi line and the Accra-Akwapim line respectively. In the first place, on the Sekondi-Kumasi line a sliding-scale system was introduced possibly to take account of the longer distance whereas there was a flat rate on the Accra-Akwapim line. In the next place, the absolute rates were considerably lower in the former than in the latter. Before this change the rates were between $3^1/_3$d/4d per ton mile on the Sekondi-Kumasi line and 9d per ton mile on the Accra-Akwapim line. Now a 50% increase was imposed on the former making it 5d/6d per ton mile which was still considerably less than on the other line. This was done primarily in the interest of increasing revenue. The indications of the previous two years being that the cacao industry in Kumasi and the South Western Province was not only well established but the traffic on that line was *growing* so that the very wide differences in the freight rates were no longer justified and were involving a total loss to the revenues which the industry might well stand. *See also the Colonial Secretary (A. A. Slater) in Legislative Council Debates 26/9/1916 p. 67.*



followed by further increase in taxation in the following year. Then the import duty on spirits was stepped up by some 13⅓% (i.e. by 1/- per gallon) and the *ad valorem* duties — except on provisions — were raised from 12½% to 20%. Furthermore, while the export duty on cacao was reduced by 20%, a new export duty on palm kernels was imposed. This was done partly to compensate for the loss of revenue occasioned by the reduction in the cacao export duty and partly in order to achieve a measure of equitable distribution of the burden of taxation as between export products. Moreover, stamp duties were increased. In addition to all these an extra-budgetary tax of a penny per letter was imposed on all letters posted to countries outside the Gold Coast. The object of this being to finance the purchase of aeroplanes for the war-effort.

The financing of the war hardly affected the pre-war fiscal structure in a fundamental way. Apart from the export duties which were imposed in 1916 and 1917 on cacao and palm kernels respectively, no new taxes were created or rather no new tax bases were established. Whenever increased taxation became necessary reliance was placed on increase in import duties supplemented by increased telegraph charges and railway freights and fares. In addition, there was the extra-budgetary tax on letters posted to

destinations outside of the Gold Coast for the purpose of financing the purchase of aeroplanes as a war contribution to the metropolitan country. There were no direct taxes. It is, of course, not quite true to say that there were no direct taxes in the Gold Coast. There were at least two forms of direct taxes but these were not significant in the context of central government finances. In the first place, there were mining royalties and, in the next place, municipalities rates. The one was collected by the central government from concessionaires on behalf of the 'state' or Native Administrations and the other was quite clearly municipality of local government income. The central government levied no direct taxes at the time nor was it in any position to exploit the possibilities of direct taxation in the conditions of the Gold Coast economy of 1914-1918. The economy being predominantly a subsistence economy, with hoarding so rampant in the country and direct wage-earning employment being so restricted it would have been quite impossible to locate the sources of income or the various streams of income themselves. Even were it possible to locate these the system of taxation resulting would have been most unjust were an income tax ever attempted at this stage. Moreover, in the circumstances of war-time such an innovation would most certainly have led to social disequilibrium. In the circumstances the fiscal structure remained the most appropriate that the social context permitted at the time.

Now as to the results. The salient features of these are borne out in the following tables:

REVENUE CLASSIFIED 1913—1918 (£)

	1913	1914	1915	1916	1917	1918
Taxation (Customs) [1] . .	779,593	768,829	828,015	1,132,000	189,785	619,974
Quasi-Commercial [2] . .	375,788	402,858	405,017	545,475	562,390	518,469
Govt. Property [3]	6,001	5,183	6,232	8,209	10,123	9,687
Miscellaneous [4]	140,184	154,843	216,866	150,305	157,826	150,544
Total	1,301,566	1,331,713	1,456,130	1,835,989	1,624,124	1,298,674

N.B. [1]) includes both import duties and, from 1917, export duties.
[2]) covers revenue derived from the Railways, Post Office, Ferries (tolls) and light dues.
[3]) embraces rents from government property and land sales.
[4]) This is an omnibus of all other incomes such as licences, fines, court fees and stamp duties etc.

This table can be translated into a percentage classification as follows:

REVENUES CLASSIFIED (PERCENTAGES). 1913—1918.

	1913	1914	1915	1916	1917	1918
Taxation (Customs) . .	59.9	57.73	56.86	61.65	55.03	47.74
Quasi-Commercial . .	28.72	30.7	27.13	29.71	34.62	39.92
Govt. Property	0.46	0.39	0.43	0.45	0.62	0.75
Miscellaneous	10.77	11.63	14.89	8.19	9.72	11.59
	100	100	100	100	100	100

This clearly shows that total revenue increased throughout the war except for 1918 when revenue dropped below the 1913 level. To be more exact, the continuous rise in the level of revenue was reversed in 1917. The tables further leave no room for doubt that this pattern was itself largely determined by taxation. Customs duties showed a continuous rise until 1917 when the trend was reversed whereas all the other forms of government income showed an unbroken rising trend line. It may be pointed out, incidentally, that the Quasi-Commercial income apart from its financial significance may be an indicator of the trend of internal business activity. This income was heavily weighted by the incomes from internal business agencies. Only *light dues* concerned external business activity directly and even light dues declined continuously. It has been attempted to attribute the reversal of the trend of taxation income in 1917 and 1918 to the effect of the imposition of export duties on cacao and paum kernels. Reference to the tables on page 2 reflecting the movement of external trade easily disposes of this simplicist explanation. In 1917 exports did not decline. In fact exports increased over and above 1916 whereas imports declined precipituously both in volume and value in either of the years 1917 and 1918. The fall in tax revenue (Customs duties) is rather to be attributed to the decline in imports than to any delayed effect of the export duties. This illustrates how strategic imports were in the fiscal structure of the Colony during the years of the first world war.

EXPENDITURE CLASSIFIED 1913—1918 (£)

	1913	1914	1915	1916	1917	1918
Admin. Departments . .	305,457	362,799	355,242	368,072	368,538	271,606
Defence	66,404	123,133	97,266	117,414	114,410	104,345
Econ. Departments . .	724,433	957,732	857,451	640,010	600,413	607,242
Social Departments . .	134,487	131,130	147,477	148,011	150,893	163,226
Debts	111,536	131,593	154,250	151,770	151,885	162,751
Unclassified	10,975	49,463	15,329	40,669	38,140	60,316
Total	1,353,292	1,755,850	1,627,015	1,465,946	1,424,279	1,269,486

Similarly in the following tables the expenditure has been analysed in economically meaningful categories. The changes and distortions of the expenditure pattern are now clearly demonstrated. Total expenditure in 1914 was well above that of 1913 and although there was a continuous decline in the ensuing years, at no time was the absolute level of expenditure below that of 1913. The finance of the war years was thus marked by a high level of public expenditure. The percentage figure brings out the changes in the expenditure pattern more clearly. Naturally, expenditure on defence rose both absolutely and relatively tending to decline with the victory over Togoland in 1915 and East Africa in 1918. Similarly with debt expenditure. The size of the public debt expenditure was reduced by the clever manipulation of the flotation of the balance of the 1910 loan which resulted in a saving of some £ 3,000 to the

TRANSLATED INTO PERCENTAGES THIS BECOMES:

EXPENDITURE 1913—1918

	1913	1914	1915	1916	1917	1918
Admin. Departments .	22.57	20.66	21.83	25.11	25.88	19.83
Defence	4.91	7.01	5.98	8.09	8.03	7.62
Econ. Departments .	53.53	54.54	52.7	43.66	42.16	44.35
Social Departments .	9.94	7.47	9.06	10.1	10.59	11.9
Debts	8.24	7.49	9.48	10.35	10.60	11.88
Unclassified	0.81	1.93	0.9	2.69	2.67	4.42
	100	100	100	100	100	100

Colony's exchequer [34]). In the same way, apart from a slight recession in 1914 social expenditure increased continuously throughout the war years. Expenditure on administration, that is to say on the ordinary business of maintaining law and order, was higher absolutely in each of the years from 1914 than in 1913 except for 1918 when there was a violent drop.

Parallel with the growth of expenditure on the administration there was an ever more striking growth in the expenditure on behalf of 'personal emolument'. When war broke out there were some 613 European Officers in the service of the government but thereafter this dwindled year by year that by the end of November 1918 there were 521 officers — some 98 less than pre-war — of whom only 430 were actually available in the dependency [35]). Nevertheless, personal emoluments continued to rise throughout the war as evidenced in the following figures:

PERSONAL EMOLUMENTS

1913	—	£ 466,925
1914	—	£ 543,884
1915	—	£ 563,978
1916	—	£ 568,290
1917	—	£ 583,312
1918	—	£ 602,743

The percentage of total expenditure on the Economic Departments, apart from a slight rise in 1914 showed a continuous decline both absolutely and relatively. This indicates that the growth in administrative, defence, social and debt expenditure was largely at the expense of economic expenditure. That, of course, in no way implies that economic expenditure was any the less efficient.

The effect of the retrenchment policy presents greater difficulties of analysis. It is to a certain extent reflected in the trend of capital expenditure during the period. It may also be reflected in the changes in the pattern of expenditure particularly in the decline in economic expenditure in which capital expenditure is itself largely reflected although by no means the only component of that group. The indirect effects, as the stimulation to higher efficiency, completely eludes us from these figures. The volume of capital expenditure made by the public sector during those years were:

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[34]) Leg. Council Debates 1914-1915 pp. 31/32.
[35]) Leg. Council Debates 28/10/1918 pp. 3/4.

CAPITAL EXPENDITURE

1913 — £ 293,211
1914 — £ 440,341
1915 — £ 303,931
1916 — £ 206,224
1917 — £ 184,945
1918 — £ 139,588
1919 — £ 204,276

Considering the fact that the programme of capital development was itself prunned in 1914 as one of the first reactions to the war, the overall effect of that policy appears all the more serious. The drop in capital expenditure from 1914 to 1915 was over 30%. In 1915 to 1916 there was a similar drop of over 30% and this trend continued to the end of the war. In the year of cessation of hostilities the capital expenditure was about 30% of the levels of capital expenditure in 1914 in money terms.

The overall picture which the method of war-time financing presented may be summarised in the appended table:

	Total Revenue	(£'s) Total Expenditure	Budget Surplus +) Deficit -)	State of Net Assets or Surplus Balances
1913	1,301,566	1,353,292	— 51,726	887,843
1914	1,331,713	1,755,850	—424,137	468,707
1915	1,456,130	1,627,015	—170,855	292,822
1916	1,835,989	1,465,946	+370,043	622,865
1917	1,624,124	1,424,279	+199,845	862,710
1918	1,298,674	1,369,486	— 70,807	791,897

The years 1914, 1915 and 1918 were years of budget deficits. Only 1916 and 1917 were surplus years. The deficits were financed out of surplus balances whereas the surpluses went to increase those balances. Such was the pure mechanics of the war finance. Quite clearly, the budgets of 1914, 1915 and 1918 were inflationary whereas those of 1916 and 1917 were heroically dis-inflationary. On the whole, that is over the entire period of the war, there was a budget deficit of some £ 95,941 indicating that the financing of the government of the Gold Coast during the war was in its net effect inflationary. A consequential effect was to run down the reserves (or Surplus Balances) by that amount below the level it had attained in 1913. Inflationary financing *ceteris paribus* carries implications of in-equity. There are also suggestions of in-equity in the heavy increases in duties on unmanufactured tobacco, salt and matches as well as the flat rate increases in railway fares imposed

during the war. These signify a regressional tendency in the fiscal structure. The export duty on cacao (and palm kernels) too was inequitable.

Nevertheless, there was a not inconsiderable amount of development in those years. Reference has already been made to the evidence of capital formation in the private sector of the economy. There was also clear evidence of capital formation in some areas of the public sector. Considering the fact that economic expenditure declined relatively to the other types of expenditure, this is all the more remarkable and tends to signify that such economic expenditure as there was was efficiently utilised. This was particularly in evidence in the sphere of transport and communications. Considerable amount of road construction was undertaken during those years. In this field above all, there were clear evidence of what may be regarded as the beginnings of Community Development in the Gold Coast. In view of the shortage of labour [36]) the Native Administrations embarked upon a method of building roads with labour freely provided from the locality or 'state' with the aid of supervision provided by government officers through the District Commissioner and Public Works Department. The *people* were so road-conscious that in 1916 the 'Natives' around the Akwapim hills employed an Italian Contractor to construct a road 10 miles long at a cost of £ 800 per mile to link up with the main highway of traffic [37]). The result of this 'Community Development' effort was that many, many roads were constructed at a trifling cost to the Treasury. On the whole, between 1913 and the end of the war in November 1918 some 475 miles of such motor roads had been constructed. And by the end of the war the Colony had a total mileage of motorable roads of some 640 miles. In Ashanti there were some 185 miles more of such roads [38]) exclusive of bridges and chiefs pioneer roads built at the same time. The Public Works Department maintained roads increased as follows:

1913	—	331.75 miles	[39])
1914	—	358.74 „	
1915	—	352.25 „	(?)
1916	—	414.75 „	
1917	—	N.A	
1918	—	N.A.	

[36]) In 1915 only $12^1/_2$ miles of new road was built by the old direct method of the P.W.D. as compared with 67 miles in 1914. Vide Leg. Co. Debates: session 1916/17 pp. 146.

[37]) Ag. Governor's Address 23/10/1916 pp. 147/8.

[38]) Governor's Address 28/10/1918 pp. 10 and 87.

[39]) Source: Blue Book.

Similarly with the railways. In spite of the direct impact of the retrenchment policy on the railways, railway mileage increased as follows:

Year	Total Railway Milage
1913	222
1914	227
1915	246
1916	264

and between end 1912 and end 1917 rolling stock increased all round as follows: 10 (locomotives), 29 (passenger vehicles) and 186 (goods vehicles). And, in consequence, there was some 19% increase in passenger traffic and 45% increase in goods traffic between the two dates.

In the field of agriculture progress was less spectular. Reference has already been made to the inconclusive evidence on agricultural output of the main export and subsistence crops [40]). Nevertheless, during these years the Agricultural Department was being consolidated and steps were being taken to lay the foundations of sound and systematic agricultural progress in the years ahead. The task of agricultural improvement in an underdeveloped community is difficult in the extreme. An experiment at setting up 'model farms' in the chiefdoms was undertaken by the department. Unfortunately, this scheme had to be abandoned as it was found that the chiefdoms "very frequently allowed them to fall into a condition which belies their name" [41]). The government was more successful with the setting up of model stock farms in the Northern Territories the first of which was established in the neighbourhood of Kanjarga in 1917. Heroic efforts were also made at developing a system of agricultural education. In 1913, for instance, a scheme was inaugurated in the Eastern Province of the Colony to promote a more efficient system of instruction in cacao cultivation. In that year „Fourteen intelligent men, two from each Head Chief's Division, were nominated by the chiefs and sent to Aburi where they underwent a short course of instructions in the cultivation and preparation of cocoa'. At the end of the year they returned to their divisions to put their training into use [42]). This scheme was extended to Ashante in 1914 [43]). Similarly, in 1917 a rural school was opened at Assuantsi in conjunction with the Agricultural Station there. Its

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[40]) cf. Pages 12/13 supra.
[41]) Leg. Co. Debates 21/11/1917 p. 116.
[42]) Agricultural Department Report 1914 ADM. 5/260 p. 12.
[43]) ibid.

primary objective was not so much technical agricultural education (the business properly of an agricultural college) as to promote intelligent farming in the country. This school offered instruction in the three "R's" as well as in general agricultural practice and elementary theory to youngsters who were aiming to make farming their future career. One serious handicap of this experiment right from the start was the low general educational standard of those who were being simultaneously trained as agricultural instructors [44]).

Considerable amounts of Para Rubber seeds and seedlings were distributed during the war years and the years immediately preceding the war. A good deal of these went to waste. But during these years cacao was the main obsession. The buoyancy of the cocoa market in the pre-war years encouraged the extensive cultivation of cacao. One result of this being that "almost every other produce was neglected". Another effect was that not much attention was currently given to the established farms and disseases, especially those associated with the fruits, infected the cocoa farms and became rampant throughout the country. The depression in the export sector of the economy intensified these difficulties through the abandonment and neglect of the farms. The olygoponistic organisation of the cocoa export market in the Gold Coast, the cocoa export duty [45]), the currency disturbances each in their turn exerted its own influences to intensify the difficulties of the farmers and so the deterioration of farming. Thus the modern problems of the cacao were already in evidence but the government was bewildered by the

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[44]) Agricultural Report 1918 - ADM. 5/265 pp. 7/8.

[45]) There were some six and not more than eight firms in the trade. In 1919 Mr. John Maxwell the Acting Secretary for Native affairs in the Government tells us that "in 1916 the principal and in fact almost the sole exporters of cocoa were the combine and a few large European buyers numbering ..... not more than 20". And there was a tendency to shift the cocoa export duty on the farmers through lowering of prices. Thus the imposition of the $^1/_4$ d per lb export duty on cacao in 1916 was followed soon after by a lowering of prices. This experience was paralleled by the experience with the *preferential duty* on palm kernels in 1920. Theoretically the conditions for complete transfer of the incidence of the duty on to the farmers existed. The extra-territorial merchants in the Colony made considerable profits out of which Major Gray (cf. Legislative Council Debates 2/11/1918 p. 253) tells us they paid 85% *excess profits* tax to the British Government "for having cocoa profits made during the war". There was, on the other hand, some evidence of considerable underpayment of the farmers because of which "it was even rumoured that some of the farmers themselves *were* about to combine to ship direct". (Vide Colonial Secretary Leg. Co. Debs. 27/11/1917 p. 139 and Governor, Leg. Co. Debs. 28/10/1918 p. 52).

vastness of the sociological problems connected with its solution. Year after year the Agricultural Department's reports repeated exhortations which hardly reached the ken of those most concerned [46]).

In yet another sphere, the foundations were laid for future development. Major Kitson's geological surveys as well as his positive mineral discoveries from 1914 onwards did augur well for the future. His comprehensive survey indicated that there were great possibilities for the development of agriculture particularly rice, wheat and maize in the Northern Territories when due attention had been given to the development of their land communications [47]). In 1914 he discovered manganese sofewhere near mile-thirty-four on the Sekondi/Kumasi railway line. Arrangements were effected in July, 1916 for its immediate exploitation and by December that very year over 4,000 tons had been shipped to England where it was urgently wanted for the war. Its output has continued to increase since then and today the Gold Coast is the second largest supplier of Manganese of the world market. Again, between 1915 and 1916 Kitson discovered bauxite on the Kwahu Plateau. Today bauxite promises to be one of the most important (if not the most important) mineral products of Ghana. This bauxite discovery is also significant of the inner contradiction of improperly informed colonial nationalism. Four years before the appearance of J. A. Hobson's *Taxation In The New State,* Sir Hugh Clifford's administration proposed what in effect amounted to "nationalization" of the Kwahu bauxite mines. With an eye to the Udi Coal Mines precedent in Nigeria is was pointed out that there was "not the slighest doubt that it is more advantageous to the Colony as a whole that any profits which may accrue from it should be brought to the credit of the public Treasury than that they should go to swell the incomes of shareholders in Great Britain or elsewhere [48]). But nationalist leaders — particularly the nationalist lawyers in

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[46]) The unpopularity of the West African Currency Board's Notes on introduction evoked the familiar Gresham's law and considerable speculation in exchange dealing between currency Notes and Silver. On the 30th June 1919 e.g. Nana Ofori Atta was induced to ask the following questions in the Legislative Council:

"Whether the Government are aware of the serious differentiation made in the valuation of silver and of Notes by the local cacao buyers in the Colony?" "And whether the fact that at Nsawam 25/- in silver is paid for a load of Cocoa while the current price is 34/6d as paid on the 30th May in Notes is in any way a secret concern?" Of course, it was not!

[47]) Legislative Council Debates 23/10/1916 (Col. Sec.) p. 207.

[48]) Legislative Council Debates 25/10/1917 (Governor) p. 162.

the Legislative Council — clinging to an out-worn orthodoxy of 19th century *laissez faire* competition "in the open market" successfully frustrated the attempt. They were completely blind — almost fanatically so — to the rationale of the socialistic tendencies which, no doubt, were exerting their influence on the war-time coalition government in Britain. But the government attitude was no less determined by any blind or even rational conversion to socialism. It was to be acquired "primarily to meet imperial requirements" promptly — to ensure that the scarce bauxit requirements for war would be satisfied from an assured source. The slowness of ordinary flotation in the London market had to be contended with if the concession had to be exploited by private business capital in the 'normal' way. But war bides no delay. The significance of this lies in the fact that had the concession been "nationalised" the net profits of the mine would not only have provided an additional source of revenue to the Treasury but a policy for mineral exploitation would have been established in line with the Secretary of State's Mining Policy directive of 1946 but antidating it by almost a generation.

There is one area of the social field in which there is some slight evidence of progress too. That is in the sphere of education. And this in spite of the fact that there was a good deal of dislocation in this field due to the internment and ultimate repatriation of the Basel Missionaries and the transfer of their schools to the Scottish Missionary Society. The changes reflected in the following statistics of the educational position are instructive in this respect:

Year	Total No. of Schools	Pupils Enrolled in Government and Assisted Schools	Estimated Expenditure
1913	143	18,810 (13,894)	£ 31,499
1914	148	20,216 (15,152)	£ 29,903
1915	168	20,681 (15,918)	£ 32,414
1916	171	22,456 (17,611)	£ 33,360
1917	191	24,724 (19,822)	£ 37,511

N.B. Bracketed figures represent average attendance exclusive of that in the Secondary School.

Towards the end of our period in 1918 it was already being proposed to establish a first-rate government secondary school or "Royal College" where boys of the Gold Coast could "acquire a

sound secondary education, far in advance of that then attainable without being compelled to migrate to Europe for the purpose" [49]). Sir Hugh Clifford could well be said to have given conception to the Achimota idea.

There is thus clear evidence of pockets of development in the vestment of the economy of the Gold Coast during the war years. But it is not possible to say whether this all added up to a net real increase in the national income over the period as a whole. Certainly, o good deal of whatever developments had taken place was subsequently lost through the influenza epidemic at the tail-end of the period which robbed the population of some of its members [50]). The gains of the period were thus partly destroyed by a catastrophe.

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[49]) Governor's Address 1918 Leg. Co. Debates 28/10/1918 p. 126.

[50]) There is no doubt that the influenza epidemic ravaged the population although the precise extent is hard to know. There are almost conflicting official accounts of this. In 1918 the Governor estimated that between 10% and 20% of the population died *vide Leg. Co. Debates 1918-1919 p. 24.* But in 1919 it was "estimated that between 4% and 5% of the population, that is between 60,000 and 70,000 persons, succumbed" to it. *Vide Legislative Council Debates 20.11.1919 p. 137.*

ETUDES DE FINANCE ET DE DEVELOPPEMENT

Expérience de la Côte de l'Or (Ghana) 1914-1918

par le Professeur N. A. COX-GEORGE.

Ire partie.

Une économie exportatrice pendant la guerre 1914-1918.

Au cours des dix premières années du 20me siècle, la Côte de l'Or devint nettement un pays exportateur. Tandis qu'avant 1914, le caoutchouc, les produits dérivés du palmier, l'or et les noix de coco s'exportaient en quantités assez importantes, vers la fin du 19me siècle l'économie du pays subit une nouvelle orientation par l'introduction du cacao et la réussite de sa culture sous le régime de la „Pax Britannica". Vers 1913, le cacao avait conquis la première place dans les exportations du pays, à la fois en volume et en valeur. Il constituait alors environ 50% du total des exportations. La première guerre mondiale donna un coup de fouet à ce développement. A en juger par les chiffres d'importation et d'exportation, le montant du commerce extérieur du pays s'accrut pendant la période 1913-1918. En réalité, la guerre eut un effet de dépression sur le commerce extérieur, car il y eut au total une diminution du volume des exportations, ainsi que le traduisent les indices de volume des transactions pendant cette période. Cependant, on remarque pendant ce temps l'importance croissante des exportations de cacao.

En pourcentage des exportations totales de productions intérieures, la valeur des exportations de cacao s'éleva de 50% en 1913 à plus de 69% en 1916 et bien qu'il y eut une diminution de ce pourcentage en 1917 et 1918 — due en partie à une chute brutale du prix du cacao — le tonnage total du cacao de ces deux années fut beaucoup plus élevé que la moyenne de la période d'avant-guerre. Le prix du cacao subit de grandes variations pendant la période, variations annuelles aussi bien que saisonnières.

Le coup d'arrêt subi par la navigation fut un important facteur de dépression du commerce extérieur pendant la période. La navigation fut tellement restreinte qu'à partir de 1915 la vue de bateaux sous pavillon américain devint spectacle courant dans les eaux de la Gold Coast. La corrélation parfaite entre le volume des exportations et le tonnage des entrées de bateaux démontre l'importance de la navigation pour le commerce extérieur.

Etant donné l'absence totale des indices habituels, il est impossible de déterminer les conditions du marché économique intérieur. Cependant, on en a quelques indications par un indice qui supplée et qui est basé sur le flux monétaire intérieur. Il fait constater une forte augmentation du trafic, en comparaison de la dépression du secteur extérieur et ces conditions persistèrent pendant la période de guerre.

D'une part, la pénurie de marchandises importées, due à l'arrêt de la navigation et le manque d'importations venant de pays „ennemis"; d'autre part, l'inflation des coûts engendrée par la répercussion de la guerre, créèrent un accroissement considérable de la production et de la répartition des denrées. Ceci ressort de l'augmentation du volume des produits intérieurs transportés par rail. Le fait que le kilométrage par voie ferrée ou le tonnage côtier auraient pu s'accroître pendant la période n'entre pas en ligne de compte, car les chiffres prouvent une corrélation négative entre la répartition des denrées indigènes et le volume des denrées importées, les premières marquant une augmentation alors que les secondes étaient en décroissance et vice versa.

Le transfert de la main d'oeuvre de l'agriculture à l'armée fut probablement un autre facteur d'inflation. Plus de 7000 hommes furent inclus dans ce mouvement et, dans ce nombre, certains des plus productifs des agriculteurs des Territoires du Nord. Le résultat en fut que la demande accrue de produits agricoles, alimentaires en particulier, ne put être satisfaite, faute de main d'oeuvre adéquate.

En ce qui concerne l'industrie minière à laquelle les chiffres accordent, dans la période, une importance immédiatement inférieure à celle de l'agriculture, quoique il y ait eu augmentation dans le total de la main d'oeuvre minière, cette augmentation fut surtout due à l'emploi d'Africains d'autres territoires. En moyenne, il y eut diminution de l'emploi des originaires de la Gold Coast, en comparaison de ce qui existait en 1913. L' accroissement global de la main d'oeuvre minière dut, en tout cas, influer sur la poussée de la demande dans le pays, en ce que au moins une partie des salaires des „étrangers" employés fut dépensée dans le Territoire.

L'augmentation de la monnaie en circulation donne quelque indication sur l'important accroissement de l'activité des affaires intérieures à cette époque. La circulation monétaire fut en constante augmentation et, à la fin de la période, elle devint plus de 5 fois ce qu'elle était en 1913. On doit y ajouter la probabilité d'une augmentation de *vitesse* de ladite circulation, due aux conditions psychologiques particulières. Sans nul doute, pendant la période, s'exerça sur l'économie une pression inflationniste considérable qui

dut mener à une inflation effective, étant donné l'inévitable absence de contrôle dans un pays sous-développé.

Quoique en l'absence de toute estimation du Revenu national, il soit malaisé de constater s'il y eut quelque progrès économique pendant la guerre, il y eut indiscutablement une importante augmentation de la production et de l'exportation du cacao, produit agricole principal. En fait, les chiffres d'exportation n'expriment pas l'exacte vérité, car, en raison de la chute brutale des prix vers la fin de la guerre et de l'arrêt de la navigation, une très grande partie de la production ne fut pas récoltée ou fut détruite. Une estimation de 1917/1918 signale que les 3/4 seulement de la récolte furent cueillis et la moitié vendue. L'exportation de tous les autres produits agricoles déclina, sauf celle des noix de kola et celle du caoutchouc; il en fut de même de productions non agricoles telles que l'or et le bois en grume. Les exportations de manganèse qui avaient débuté en 1915 se poursuivirent en augmentant, mais le tonnage en demeura faible.

Dans le secteur de l'alimentation, quoique on eût pu penser que la guerre dût faire accroître la production de denrées alimentaires dont les prix étaient fort élevés, ces augmentations de prix ont peut-être davantage enrichi les intermédiaires qu'ils n'ont incité les agriculteurs à plus d'activité.

En l'absence de chiffres, il est également difficile d'indiquer le montant du capital en formation pendant la période donnée. Malgré la naissance d'une économie à base monétaire, l'habitude d'épargner ne passa point dans les moeurs. Les banques commerciales établies dans le pays — citons la Banque anglaise de l'Ouest africain en 1897 et la Banque Barclay en 1917 — se contentaient d'être les banques du Gouvernement et des grandes entreprises commerciales. Le grand public n'utilisait que fort peu ces institutions et confiait son épargne à la Caisse d'Epargne postale créée en 1887. Les filiales et les déposants de cette Caisse se chiffrèrent respectivement à 13 et 5.593 en 1913 et à 32 et 5.816 en 1918. Le total des dépôts s'accrut aussi pendant cette période, quoiqu'il y eut, en 1917 et 1918, une diminution peut-être due à la consommation des capitaux en conséquence de la vague inflationniste. En résumé, l'épargne institutionnelle ne fut qu'insignifiante. La formation de capital dans le secteur privé est mise en lumière par l'accroissement, entre 1913 et 1920, de l'évaluation totale des propriétés dans les trois municipalités d'Accra, de Cape Coast et de Secondee. On aurait pu appliquer cette constatation à tout le pays, ainsi que le fit un législateur africain, Nana Sir Ofori Atta qui, en 1919, déclarait que les exploitants employaient leur argent à bâtir des maisons et à asseoir leur position sociale.

IIme Partie.

Les Finances et le Développement pendant la guerre 1914-1918

La guerre greva de dépenses supplémentaires le gouvernement de la Gold Coast. L'entretien d'un corps expéditionnaire envoyé au Dahomey et le versement d'environ 80.000 livres à l'effort de guerre du Trésor Impérial constituèrent un fardeau supplémentaire à un budget déjà alourdi, au début de 1914, par les augmentations de salaires des fonctionnaires européens et africains. La dépression commerciale et les pressions inflationnistes pendant la guerre aggravèrent ensuite la situation financière. Elle ne fut pas précisément améliorée par les versements d'indemnités et d'allocations effectués aux fonctionnaires pour leur permettre de faire face, pendant la période, au coût élevé de la vie et qui contribuèrent, en réalité, à aviver la flambée inflationniste.

Ajoutons à ceci que les opérations financières furent rendues plus difficiles par le „Surplus Balances Development Programme" lancé par le Gouverneur Sir Hugh Clifford en 1912. Pour ne pas compliquer la situation, on dut élaguer la programme de développement et les dépenses sur prêt nécessitèrent de prélever une forte avance sur les bonis. De plus, la décision prise, sur la suggestion du Secrétaire d'Etat, d'étaler la contribution de guerre de la Colonie sur une période de 10 ou 15 ans, réduisit à 10.000 livres le versement immédiat.

En 1915, en dépit d'un accroissement des exportations, il y eut un effondrement des importations lequel, en réduisant les recettes douanières, aggrava les difficultés financières du pays. En outre, étant donné les difficultés que prévoyait le Secrétaire d'Etat quant au lancement d'emprunts coloniaux sur le marché de Londres, on fit savoir au Gouvernement d'avoir à disposer d'un fonds de roulement de 70 à 150.000 livres st. Ceci équivalait à mettre l'embargo sur les bonis de 1914 et 1915. En conséquence, il devint inévitable de prévoir l'augmentation des impôts pour le financement du programme de développement, même restreint. L'augmentation d'impôts fut constituée: 1) par l'augmentation des droits sur un certain nombre d'articles de consommation intérieure et 2) par l'égalisation des droits de douane à l'est et à l'ouest du Volta. On pensait que les augmentations procureraient un accroissement de revenu de plus de 145.000 livres pour une année pleine et environ 100.000 pour les trois derniers trimestres de 1915. Mais de nouvelles difficultés financières surgirent avec la découverte d'un passif de quelque 195.000 livres dans les chemins de fer, ce qui transforma en déficit l'excédent attendu. On résolut le problème en ajournant la contri-

bution de guerre, en coupant dans les crédits extraordinaires accordés aux travaux publics, en arrêtant la construction projetée du Northern Railway et en augmentant de 15% les taux des chemins de fer.

En 1916, on dut trouver de nouveaux impôts, à cause surtout de l'augmentation de la contribution de guerre de la Colonie. On créa des droits de sortie sur le cacao et on augmenta les prix de transport des noix de cacao, et aussi les droits de justice. De plus, on institua une taxe extra-budgétaire sur les lettres à destination de l'étranger; le produit en fut spécialement affecté à l'achat d'avions en tant qu'effort de guerre. Comme à l'époque, les nécessités sociales et autres étaient convenablement satisfaites, le Gouvernement ne créa pas d'impôt direct.

Le résultat de ces mesures fut que les recettes publiques furent en augmentation progressivxe pendant la guerre, quoique la chute du volume des importations entraînât après 1917 une diminution des recettes douanières. Les dépenses publiques s'accrurent en 1914 et, bien qu'il y eut une diminution en 1915 et les années suivantes, le total des dépenses pendant les années de guerre ne descendit jamais au-dessous du chiffre de 1913. Les dépenses sociales aussi bien que les dépenses concernant l'administration et la défense furent en augmentation constante. Il en fut de même des dépenses afférentes à la dette qui eussent pu être plus fortes, n'eût-ce été l'aménagement adroit de l'emprunt de 1910. Dans l'augmentation des dépenses administratives, on doit surtout tenir compte des traitements du personnel. Il y eut, pendant la période, diminution dans les seules dépenses économiques, ce qui prouve que l'augmentation des autres dépenses se fit au détriment du développement économique.

L'effet de la politique d'économies adoptée pendant la guerre se répercuta dans la très forte diminution des dépenses capitales dans le secteur public entre 1914 et 1915 et la baisse constante des dépenses économiques pendant le même temps.

Les budgets de 1914-1915 et 1918 furent inflationnistes tandis que ceux de 1916 et 1917 furent déflationnistes. Dans l'ensemble, cependant, la politique financière du gouvernement fut inflationniste pendant la période et le résultat en fut la disparition des réserves ou des bonis qui existaient en 1913.

Outre la formation de capital, déjà citée, dans le secteur privé, il y eut quelque formation de capital dans le secteur public. On entreprit, sur la base du développement de la communauté, la construction de routes et quelque 475 miles de routes nouvelles étaient construites à la fin de la guerre. Le kilométrage de voies ferrées augmenta, ainsi que le matériel roulant avec, comme conséquence,

un accroissement de 19% dans le transport de passagers et de 45% dans le transport de marchandises.

L'agriculture progressa également. Les services de l'agriculture s'affermirent pendant cette période et, malgré quelques expériences décevantes de fermes modèles dans diverses régions, l'enseignement agricole se développa et de jeunes éléments de différentes origines furent initiés à la culture du cacaoyer et renvoyés ensuite chez eux pour y mettre cet enseignement en pratique. L'expérience souffrit cependant d'un grave défaut: le niveau d'instruction généralement bas des moniteurs agricoles. Pendant la guerre, on distribua une quantité appréciable de graines et de plants de caoutchouc, mais cette culture fut mise en échec par l'engouement dont bénéficiait la culture du cacaoyer. Le manque de soins aux hévéas et à d'autres cultures fut la cause de maladies qui se propagèrent aux cacaoyers. Ceci s'ajoutant à la chute de prix du cacao, à l'organisation oligopolistique de son exportation et aux droits de sortie, le tout aggrava les difficultés des producteurs de cacao et, en manière de conséquence, l'usage de mauvaises pratiques de culture que les incessantes remonstrances des Services agricoles ne parvinrent pas à faire améliorer.

En cette même période prirent naissance les premiers éléments d'une future exploitation des ressources minérales du pays. Les prospections géologiques, conduites par le Major Kitson amenèrent la découverte de manganèse et de bauxite entre 1914 et 1915. L'importance de ces découvertes est telle que le Ghana est maintenant le second pays gros producteur de manganèse dans le monde et qu'il semble que la bauxite sera le minerai le plus important dans le développement futur du pays. Un moment à noter dans cet enchaînement de faits est celui où le Gouverneur suggéra au Conseil Législatif de nationaliser les mines de bauxite de Kwahu, idée que fit abandonner l'opposition des membres nationalistes de la législature.

En ce qui concerne l'éducation, en dépit du bouleversement dû à l'internement puis au rapatriement définitif des Missionnaires de Bâle qui avaient été quelque temps les principaux pionniers en ce champ d'action, des progrès se firent sentir pendant cette période et, en 1918 fut soulevée la question de créer une bonne école secondaire d'Etat pour les garçons.

On peut donc, de toute évidence, constater un certain progrès économique et social pendant la période donnée, quoique l'ignorance où l'on est du montant du revenu national rende impossible la mesure exacte de ce développement. Cependant, jusqu'à un certain point, l'épidémie de grippe qui sévit à la fin de la période détruisit, par ses effets, les progrès qui avaient été acquis.

BOOK REVIEWS / CRITIQUES

Günter Schmölders, *Finanzpolitik*. Springer, Berlin - Göttingen - Heidelberg (1955) - pp. VI and 340.

Schmölders' Finanzpolitik has been published more than two years ago. Several extensive reviews have been published in German [1]) but I welcome the opportunity to bring this informative and challenging work to the attention of the students in public finance in the many countries in which this Journal is read. The book is much more readable than most textbooks in public finance. Also it breaks new ground in focussing on the psychology, sociology, and politics of the decision making process by which public finance policies [2]) are determined. The economic aspects, which are dominant in other recent works in the field [3]) are not neglected but Schmölders fails to warm up to these aspects as he does to the psychological and institutional aspects.

Perhaps it may be as well if I state here at the beginning of my review that in my opinion a successful treatise on public finance policy requires an integration of the psychological, sociological, and political aspects with the economic ones. While I appreciate Schmölders' important contribution I believe that his work doet not bring about this very much needed integration. This in itself should not be regarded as a too severe criticism because most of the authors who approach the subject primarily from the economic aspect have failed no less in this task of integrating the political with the economic aspects.

In his psychological and sociological treatment of public finance decisions Schmölders shows much imagination. He is familiar with the psychological and sociological literature although I find that the use he is making particularly of depth psychology and psychology of the masses is rather far fetched.

In the discussion of government expenditures Schmölders used Adolph Wagner's law of the rise in the relative importance of

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[1]) Examples of valuable reviews are Heinz Haller in *Weltwirtschaftliches Archiv*, Vol. 78, 2 (1957) p. 131 ff; F. K. Mann in *Finanzarchiv* Vol. 17, 3 (1957), p. 451 ff; Wilhelm Weber in *Zeitschrift für Nationalökonomie* Vol, XVI, 1-2 (1956), p. 225 ff.

[2]) I translate *Finanzpolitik* as used by Schmölders with "public finance policy" while the same word as used e.g. by Haller (see footnote 3) can be translated as "Fiscal Policy." Schmölders does not believe in fiscal policy as the term is used in the anglo-american literature.

[3]) See for example Heinz Haller, Finanzpolitik. Grundlagen und Hauptprobleme. Tübingen - Zürich (1957).

government activities as a point of departure. He cites figures covering several decades which appear to confirm Wagner's law. Most of the increases in government expenditures during that period were however, directly or indirectly related to wars. A judgment about the validity of Wagner's law would require an analysis of the effect which the process of industrialization and urbanization (or sub-urbanization) has had on the demand for additional government expenditure program. Schmölders expresses a general opinion that expenditures, particularly for social purposes, have risen too much for the good of economic development. This thesis may be true for some countries. However, a more searching analysis would be required to support such a sweeping generalization. Unproven is Schmölders' general statement (p. 115) that government outlays in the average contribute to real income less than a corresponding amount of private spending or investment. He does not discuss the way in which various government activities are reflected in real income nor the contribution made to economic development by various types of private or public spending, such as spending for national security, research, education, conservation and development of resources or for automobiles, TV, and other comforts. A general assumption that in case of doubt any addition to private spending is more productive than a corresponding addition to public spending can be as fatal as the opposite general preference for public spending. Schmölders' view that government spending is always inferior to private spending has been widely shared in the United States in recent years. This view had been shaken, however, by the „Sputnik effect", which brought deficiencies in high priority public programs (e.g. in the field of research and education) to general recognition.

Also another argument requires examination. Schmölders contends that a government payment e.g. in aid to refugees is self-defeating if the payments are financed by taxes which cause a price rise (p. 116). If a payment of 30 dollars is made to a destitute family its value is not wiped out even if through the effects of the tax measure, its real purchasing power is reduced to 25 dollars.

In the discussion of the incidence of taxation Schmölders discusses the "announcement" effect of taxation on the motivation of the tax payer and the macro-economic effect on the flow of incomes and expenditures. Schmölders finds himself bewildered by the complexity of tax incidence and tax effects. He concludes that in the maze of tax repercussions in the last analysis economic and social policy can only use legislative intent as a guide for appraising the economic effects of taxation (p. 232). This is a completely agnostic conclusion — as far as the economics of taxation is concerned.

Schmölders is most sceptical concerning the use of public finance

policy for anti-cyclical purposes, i.e. concerning fiscal policy in the more specific meaning of the term. He refers to the errors in business forecasting and also to the failure in recognizing the nature of the long term trend in economics ("mature economy" thesis) which both would lead to the possibility of wrong fiscal decisions. The difficulties of obtaining effective guidelines for an economically correct fiscal policy are formidable indeed. Furthermore, we have learned that the relationships between budget surplus and budget deficit on the one hand, deflationary and inflationary effects on the other are much more complex than was believed by many two decades ago. Schmölders is right when he warns against oversimplified notions of, and exaggerated claims for, fiscal policy. In several passages of his work he seems to take this position. In other passages however, he seems to dismiss the whole idea of a countercyclical policy. Right in the introduction he refers to "monetary-fiscal policy" as a "fad" ("Modeströmung" - p. 3). In any case, he makes no constructive contribution to a better understanding of the interrelationship between monetary and fiscal policies. No justification of the disparaging remarks but a possible explanation of the little emphasis on the economic aspects is the fact mentioned in the preface that a special volume on "fiscal theory" will be published by another author in the same series of textbooks in which Schmölders' work had appeared.

I have in this review pointed out weaknesses in Schmölders' book. Therefore, I want to end by emphasizing again the merits of the work in its political-institutional treatment of financial policies, particularly if it is used as a supplement to works which place greater and possibly one-sided emphasis on the economic aspects of public finance policy. According to my knowledge, no book organically combining these aspects is available.

GERHARD COLM

President National Planning Board
Washington D.C.

O.E.C.E. Le régime fiscal du chiffre d'affaires et son incidence sur la productivité. Rapport de M. Charles Campet A.E.P. et O.E.C.E. - novembre 1957.

Le Rapport de M. Campet constitue une étude comparative du Régime fiscal du Chiffre d'affaires dans neuf pays de l'O.E.C.E. [1]). La fiscalité est une matière particulièrement complexe et toute étude comparative est exposée à des risques de confusion et d'obscurité. L'auteur a donc beaucoup de mérite à avoir réalisé une oeuvre claire, sérieuse et logique car telles sont bien les qualités qui frappent le lecteur dès la lecture de l'introduction et qu'il retrouvera tout au long de l'ouvrage.

Toute étude complète de ce genre doit comporter une partie appliquée et une partie théorique. M. Campet a choisi de commencer par la partie théorique. A sa suite, l'étude appliquée expose puis critique chacun des quatre types d'imposition du chiffre d'affaires que l'auteur a dégagés: système à taxe générale cumulative, système rationnel à multiplicité de taxes spéciales, système mixte empirique, système à taxe unique générale. L'ordre d'étude de ces quatre systèmes ne ressort pas du hasard. M. Campet avait en effet préliminairement exposé sa „théorie du cycle", selon laquelle les systèmes nationaux — à l'exception du système britannique — subissent une évolution présentant certaines similitudes. Les grandes différences que présentent les systèmes actuels proviendraient donc essentiellement des stades différents d'évolution auxquels ils sont parvenus: le système cumulatif représentant le stade primaire, peu à peu dépassé par la multiplication des taxes spéciales qui éclosent surtout dans les secteurs où apparaissent le plus vivement les défauts du système cumulatif. Quand la complexité fait perdre figure de système à l'imposition des affaires, une réforme institue une taxe unique générale dont la forme la plus évoluée est la taxe française sur la valeur ajoutée.

Nous ne saurions trop féliciter l'auteur des qualités de clarté d'exposition dont il fait preuve au cours de cette partie grâce à laquelle tout financier est en mesure de connaître, dans leurs grandes lignes et dans nombre de leurs détails, les régimes d'imposition des affaires dans les principaux pays de l'Europe occidentale. A ceux qui auraient la curiosité de recherches plus approfondies, l'auteur fournit, dans sa bibliographie, tous les éléments pour les guider.

La partie appliquée est suivie de deux séries de recommandations que l'on retrouve dans de tels rapports: recommandations générales

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1) Allemagne occidentale, Pays-Bas, Grande-Bretagne, Belgique, Italie, France, Grèce, Turquie et Autriche.

et recommandations particulières à chacun des neuf pays, dont on peut regretter qu'elles soient aussi succinctes. Le travail fait par M. Campet pouvait nous laisser espérer des suggestions plus précises des sortes de „recettes fiscales" pour les pays considérés. Peut-être l'auteur s'est-il volontairement tenu à un plan assez général, afin de respecter la souveraineté — toujours très ombrageuse en matière fiscale — des Etats. En tout cas, ces recommandations rappellent opportunément à la fin du livre l'essentiel des conclusions que M. Campet avait dégagées de son étude théorique.

Les deux chapitres fondamentaux de la partie théorique sont intitulés, l'un „la taxation des affaires et la théorie économique", l'autre „la taxation des affaires et la productivité". Il est bien évident que, pour le premier d'entre eux, les douze pages qui le composent ne sauraient épuiser le sujet trop vaste pour être traité dans les limites de l'étude. Signalons que la section I consacrée au problème de la répercussion de l'impôt sur le chiffre d'affaires est nourri d'idées — M. Campet doit son titre de Docteur ès-Sciences économiques à une thèse sur ce sujet. La section II intitulée „Interventionnisme et neutralisme" contient d'excellentes notations sur ces termes qui ont donné lieu à tant de controverses, principalement alimentées par des confusions que l'auteur dénonce et dénoue avec son habituelle clarté.

Quant à l'étude des relations entre la productivité et l'imposition des affaires, elle conduit notre auteur à préconiser l'adoption de l'une des deux formules suivantes: Taxe unique générale assise au stade du commerce de détail ou Taxe sur la valeur ajoutée couvrant les circuits de production et de distribution sur toute leur longueur. Ces formules présentent, toutes deux, l'avantage de neutralité vis à vis du travail humain et du travail mécanique, avantage sur lequel l'auteur insiste. Et nous ne nous en étonnerons pas lorsque nous aurons rappelé que M. Campet est le collaborateur de M. Lauré, père de la Taxe sur la valeur ajoutée, laquelle, sous sa forme pure, réalise la suppression de la surtaxation des investissements.

Nous ne croyons pas trahir la pensée de M. Campet en le classant parmi les adeptes d'un certain neutralisme fiscal. En tout cas, d'une part il dénonce tout au long de son livre les fâcheuses distorsions économiques auxquelles a donné lieu une imparfaite technique d'imposition des affaires, d'autre part il ne lui semble pas possible de dégager les bases d'un système qui permette d'agir positivement sur le développement de la productivité dans le cadre de cet impôt. Une telle position de neutralité pourrait paraître paradoxale à qui pense par exemple au système soviétique d'imposition du chiffre d'affaires. Mais l'éventail des pays enclos dans le Rapport de M. Campet lui fournit un judicieux exemple de système impliquant des

possibilités d'intervention — notamment sur la consommation — sans grave distorsion économique: c'est la Purchase Tax britannique ou taxe à taux multiples, assise au stade du commerce de gros mais évitant de porter sur aucun bien intermédiaire de production; ainsi est satisfaite la norme principale de cette recherche: éviter de contrarier le développement de la productivité si on ne peut guère l'encourager dans le cadre de l'imposition des affaires.

Il serait utile — indispensable même pourrait-on dire — pour fournir les données de base nécessaires au fonctionnement du Marché Commun et éventuellement d'une zone de libre échange, que des études de ce genre soient faites pour les autres impôts. Nous ne pouvons que souhaiter qu'elles soient aussi intéressantes, aussi claires et aussi sérieuses que celle de M. Campet.

E. VESSILLIER

Ecole de Droit
Paris

PROBLÈMES FISCAUX DE LA COMMUNAUTÉ ÉCONOMIQUE EUROPÉENNE*)

par Prof. CESARE COSCIANI
Université de Naples

Le Traité qui institue la Communauté Economique Européenne, prévoit la réalisation du marché commun entre les six pays concordataires dans le courant d'une periode transitoire de 12 années, subdivisée en trois étapes de quatre années chacune. En aucun cas, cette période transitoire ne pourra être prorogée outre ces 15 années, à partir du 1er janvier 1958. Pendant cette période, les tarifs douaniers et les diverses restrictions qualitatives et quantitatives qui limitent, aujourd'hui, les échanges entre les six pays, seront graduellement et progressivement éliminés. C'est ainsi que les rapports commerciaux, dans la sphère du marché commun, seront établis sur des bases de plus vive concurrence: les producteurs subiront, d'une manière toujours plus sensible, les conséquences de chaque variation, même modeste, des coûts de production et des prix de vente. C'est ainsi que, à la fin de cette période transitoire, le poids du prélèvement fiscal, en tant qu'il se traduit par une aggravation des coûts ou par une réduction des rentes, apparaîtra dans toute son importance et, étant donné les diversités des systèmes fiscaux des six pays, donnera lieu inévitablement à des distorsions de la concurrence, qui porteront dommage à certaines économies et en favoriseront d'autres.

Que certains pays soient, de fait, plus endommagés par le facteur fiscal que d'autres, cela ressort clairement de certains faits, quoique sommaires, relatifs à l'année 1955.

Si nous considérons la pression fiscale globale des six pays, nous nous trouvons en face de deux situations extrêmes: celle de l'Allemagne qui prélève avec ces impôts le 26,6% de sa propre production nationale brute (prix de marché); à l'autre extrémité, celle de la Belgique qui prélève, avec ses impôts, à peine le 17%. L'Italie se trouve à l'avant-dernière place avec le 19,6%. C'est ainsi que l'économie du pays de la Communauté le plus chargé d'impôts subit une augmentation de la charge fiscale de 50% respectivement à celle du pays le moins chargé d'impôts.

On ne peut non plus réduire les divergences si l'on considère la

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*) Voyez aussi: Cosciani C., Problemi fiscali del Mercato Comune, Milano, Giuffré 1958.

composition qualitative des impôts. La taxe sur le chiffre d'affaires, qui influe certainement sur le prix du produit, représente en France, ou cet impôt est particulièrement développé, l' 8,1% du revenu national tandis qu'au Luxembourg, ce pourcentage descend à 3,6% (l'Italie est après le Luxembourg, le pays le moins chargé, l'I.G.E. absorbant à peine le 4,2% de notre revenu national). Par contre, les impôts directs, qui s'incorporent moins au coût du produit, que les autres, mais qui peuvent influer negativement sur la production en décourageant, dans le pays en question, l'investissement des facteurs productifs, absorbent un pourcentage du revenu national qui va de 15,7% pour le Luxembourg (pourcentage voisin de celui de l'Allemagne et de la Hollande) à un minimum de 6,2% pour l'Italie. Notre pays détient le primate au contraire, pour les autres impôts sur la consommation qui pèsent sur notre revenu national à raison de 9,1%, contre un minimum de 3,9% en Belgique.

A partir de ces données extrêmement simples, mais suffisantes pour un examen même superficiel, on voit quelle divergence il y a entre les systèmes tributaires des six pays, et combien elles sont grandes. On voit donc l'influence que ces systèmes peuvent exercer sur les conditions de production de ces pays et en général sur l'équilibre du marché. Le problème des distorsions, attribuables à des motifs fiscaux, se posera, donc, certainement, tôt ou tard, au sein de la Communauté.

Afin de permettre la coexistence, dans un marché unique, de systèmes fiscaux aussi divers sans déterminer des distorsions économiques artificielles, on a proposé diverses solutions, parmi lesquelles sont particulièrement significatives les deux suivantes, qui ont servi, du reste, à préparer l'examen de toutes ces questions au sein de la C.E.C.A.:

a) réalisation du principe de la taxation dans le pays de destination de la marchandise, ou de l'imposition dans le pays consommateur;

b) réalisation du principe de la taxation dans le pays d'origine de la marchandise, ou de l'imposition dans le pays producteur.

En vèrtu du premier principe, on procède au remboursement intégral des impôts payés par les denrées qui sont exportées, dans le pays où elles ont été produites: impôts directs ou indirects, payés durant les différentes phases de transformation et de production; c'est ainsi que ces denrées peuvent être vendues à l'étranger au net de tout impôt. En contre-partie les marchandises que sont importées payent au moment de l'importation un droit de compensation équivalant aux impôts que ce produit aurait payé s'il avait été obtenu sur le marché interne.

Le second des deux principes est le plus simple. Les produits payent les différents impôts dans le pays où a lieu la transformation ou production, quel que soit le pays destinataire de l'exportation. Partout où il va, le produit porte toujours, incorporé à son prix, les impôts qu'il a payés. Il n'existe plus des marchés distincts, mais un marché unique qui, du point de vue fiscal, est considéré comme un marché interne, en tant que le passage de la marchandise d'un pays à l'autre n'a aucune importance fiscale. Il nous parait nécessaire d'admettre que, si on veut vraîment un marché unique, il ne suffit pas d'abolir les ceintures doganales et les contingentements, mais il faut abolir toute barrière de frontière à laquelle les produits sont arrêtés, contrôlés, soumis à vérification et à prélèvements fiscaux. Maintenir une ligne de frontière, même seulement pour des fins fiscales, entre les Pays du Marché Commun, cela voudrait dire maintenir, de fait, la séparation des marchés nationaux et créer le danger de faire renaître, à la première occasion ou à la première crise économique, les barrières douanières abolies à grand peine par le Traité.

A propos de ce principe on soutient, dans certains milieux économiques, et quelques spécialistes de ces questions le soutiennent eux aussi, que les différences des structures fiscales ne donnent pas toutes lieu, nécessairement, à une distorsion économique. Une consequence de cette nature n'aurait lieu que dans l'hypothèse éminemment théorique et abstraite, d'un marché de concurrence parfaite, avec des consommateurs et des producteurs extrêmement sensibles du point de vue économique, et dans un système économique dont les organes seraient toujours en étroites relations dans ses différentes zônes et dont tous les éléments seraient en continuel équilibre. En fait, et nous continuons à insister sur ce point: le „marché unique" est bien difficile à créer, et, en pratique, nous ne le trouvons que dans le cercle de circonscriptions territoriales limitées. Même le marché national est morcelé en marchés régionaux dont les conditions de production (comme le taux de l'intérêt, le niveau des salaires, la présence du personnel qualifié, les possibilités du crédit, les disponibilités des moyens de transport et des autres économies externes) divergent d'une manière plus ou moins accentuée. Et, de même que, sans dommage très grave, peuvent varier ces conditions de la production, de même peuvent varier, aussi, certains éléments fiscaux attribuables, soit à une certaine diversité dans l'application concrète des impôts nationaux, soit à la politique financière locale qui peut frapper les revenus et aussi la production avec une intensité et des modalités diverses. Elément qui peut assumer une importance considérable dans des Etats où les finances locales ont une influence déterminante comme la Suisse (où les

impôts communaux et cantonaux représentent, au total, la moitié des impôts) ou jouissent d'une autonomie particulière (comme dans la finance d'état des Etats-Unis). Cependant, ces divergences, dont on doit tenir compte, ne sont pas assez importantes (et ceci, toujours, selon l'avis de ceux qui soutiennent le principe de taxation sur le marché d'origine), pour qu'elles puissent déterminer des déplacements appréciables dans la production de localité à localité [1]).

Cependant, selon cette thèse, on ne doit pas exiger que la fiscalité soit parfaitement égale, en chaque cas et en chaque circonstance, entre les six Pays de la Communauté. Et surtout pour un marché en voie d'unification où coexistent beaucoup d'éléments de divergence dans les coûts, difficultés destinées à s'applanir seulement avec le temps, et où, en même temps, subsiste une certaine viscosité naturelle des facteurs de production en ce qui regarde les déplacements d'un Etat à un autre, les inconvénients que l'on craint n'ont heureusement pas lieu. La distorsion économique ne naît que si les divergences dépassent certaines limites. Naturellement il est très difficile de décider a priori dans quelles limites les divergences des dispositions fiscales et des incidences respectives sont compatibles avec l'unité du marché, et au-dessus de quelles limites se créent des distorsions qui sont incompatibles avec une telle unité. Cependant, à ceux qui soutiennent ces raisonnements, qui semblent valides en théorie, on peut objecter ce fait, que dans la réalité historique, les diversités existant dans les structures fiscales des six pays sont tellement importantes qu'elles dépassent les limites de tolérance dont nous venons de parler et tellement grandes que, si on réalisait le principe de la taxation sur le marché d'origine, on créerait, sans aucun doute, de très nombreuses et importantes distorsions dans la concurrence, et telles qu'elles viendraient même à mettre en question le fonctionnement du Marché Commun.

En faveur du principe de la taxation sur le marché d'origine, on fait valoir un second argument, qui est soutenu avec une certaine circonspection par la Commission des économistes, présidée par le prof. Tinbergen de l'Université de Rotterdam, Commission nommée par la Haute Autorité de la CECA pour étudier ce problème dans le cercle de cette Communauté [2]). Elle est soutenue encore plus vigoureusement par la Commission des experts, présidée par Coppè,

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[1]) Cfr. Shoup (C.): Taxation Aspects of International Economic Integration in „Aspects financiers et fiscaux de l'intégration économique internationale". (Travaux de l'Institut International de Finances Publiques), Francfort, 1952, pp. 112-118.

[2]) CECA: Relation sur les problèmes déterminés par les impôts sur le chiffre d'affaires dans le Marché Commun, Luxembourg, s.d. Voir surtout p. 24.

nommée dans la suite pour examiner certaines critiques à la relation précédente [3]). On a soutenu à cette occasion, et les techniciens et les théoriciens continuent à affirmer encore aujour-d'hui que le cours des changes, dans certains cas, est en mesure de compenser automatiquement, sans nécessité d'interventions correctives, les différents niveaux de la pression tributaire, qui pèse sur les marchandises échangées.

Et voici l'essence de cette thèse.

On suppose un régime de changes flexibles, libre des restrictions du commerce international, comme cela devrait se passer dans les rapports entre les différents Etats composant le Marché Commun. Dans cette hypothèse, dans des conditions statiques, l'équilibre des échanges internationaux rompu par l'introduction d'un impôt indirect, se rétablit automatiquement. En effet, si le nouvel impôt détermine — il est vrai — une nouvelle augmentation du niveau général des prix internes, le principe de l'égalité des pouvoirs d'achat, principe qui remonte à Ricardo et à Stuart Mill, et qui a été divulgué et élaboré, surtout, par Cassel [4]) est sauvegardé: en effet, après une certaine période de redressement, le cours des changes s'adapte au nouveau rapport entre le niveau des prix des Pays en contact réciproque, rétablissant l'équilibre primitif.

Cassel en effet part de cette prémisse: l'acheteur, acceptant de payer un certain prix pour acquérir une monnaie étrangère, entend posséder ainsi une monnaie qui a un certain pouvoir d'achat d'une certaine quantité de marchandises à l'intérieur dudît marché. En conséquence, si la monnaie étrangère perd de la valeur sur le marché à la suite d'une augmentation du niveau général des prix, dû à une aggravation de la pression fiscale, l'acheteur étranger qui entend s'assurer le même pouvoir d'achat dans la monnaie de l'autre marché, devra acquérir une valeur nominale supérieure de devises étrangères. Cependant, puisque la valeur effective qu'il entend acquérir n'a pas varié, il sera disposé à payer le même montant qu'auparavant, dans sa monnaie nationale. C'est-à-dire qu'il entendra acquérir la même quantité de devises étrangères en payant une somme, en monnaie nationale, proportionnellement moindre. En d'autres termes, le cours des changes, à la suite de l'aggravation de la pression tributaire, s'adapte au changement du niveau des prix, en rétablissant les conditions des changes précédents.

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[3]) Ce rapport n'a pas été publié. Le problème a été discuté sous le no. 1.

[4]) Cassel (G.): *Money and Foreign Exchange after 1914.* — New York, MacMillan, 1823. Pour une exposition de ce principe accueilli avec quelques réserves, voir Taussig F.W.): *Principles of Economics.* — New York, MacMillan, 1939. Vol I, chapt. 32 et 33.

Supposons que entre deux pays (A et B) de la Communauté il y ait un change de 100 à 100. Un individu qui réside dans le pays A, lorsqu'il demande des devises du pays B, entend ainsi acquérir les moyens qui lui sont indispensables pour s'assurer une certaine quantité de biens sur ce marché, que nous supposons contenus dans un corbeille idéale. Pourvu qu'il puisse acquérir cette corbeille, il est disposé à céder un certain pouvoir d'achat, une certaine quantité de monnaies nationales, c'est-à-dire une autre corbeille égale sur son propre marché. Si pour lui les deux corbeilles ont la même et identique valeur, le prix qu'on devra leur attribuer sera le même. Dans notre cas les deux corbeilles vaudront 100 de monnaie nationale dans le pays A et 100 de monnaie nationale en B.

Supposons, maintenant, que A introduise un impôt de 10% si bien que le prix de la corbeille dans le pays A augmente, arrivant à 110. Puisque les deux corbeilles conservent la même valeur intrinsèque, celui qui réside dans le pays B, et qui veut acheter une corbeille dans le pays A, sera disposé à céder les 100 unités monétaires nationales seulement s'il pourra obtenir 110 unités monétaires du pays B. En autres mots, le cours de changes tendra à se fixer entre 110 et 100.

Comme on voit, au moins en cette première approximation, le cours des changes a automatiquement corrigé le désavantage du pays qui a vu augmenter ses prix à la suite de l'impôt, en tant que la variation du prix des devises étrangères lui a permis d'augmenter ses propres recettes dans le même rapport selon lequel l'impôt en a élévé les coûts. Cependant, à la rigueur, il ne semble pas nécessaire, au moins après une période de taxation, que le pays qui a augmenté sa propre imposition mette en acte le principe de la taxation auprès d'un pays de consommation avec une politique de remboursements à l'exportation et les droits compensateurs à l'importation, parce que les échanges commerciaux en définitive n'en souffriraient pas. D'autre part, il faut observer que, si l'Etat qui augmente la pression tributaire procède à des remboursements à l'exportation, en faisant cela, il ne favorise pas ses propres exportations, mais il ne fait que corriger à travers le mécanisme des remboursements et droits compensateurs le cours des changes, change qui, dans cette hypothèse, resterait fixe dans son expression nominale, et par conséquent, dans le rapport primitif. En conclusion les deux systèmes, comme nous avons dit, se valent.

Mais la thèse de la compensation des niveaux des charges tributaires à travers le mécanisme automatique du cours des changes, rencontre de telles critiques qu'il nous laisse fortement perplexes quant à sa validité théorique, et, dans tous les cas, cette thèse répond-elle à la réalité concrète?

Ces derniers temps, la théorie de la parité des pouvoirs d'achat, présentée à la base du raisonnement dont nous venons de parler, a été âprement critiquée, si bien qu'on doute à l'heure actuelle de sa validité comme concept et de son utilité pratique[5]). Et ceci, aussi, en acceptant de partir des mêmes prémisses posées à la base de la théorie, entièrement étrangère à la réalité historique de notre âge, et qui supposent:

a) un échange libre débarrassé des entraves du commerce international (hypothèse qui pourrait se vérifier par le Marché Commun);

b) un transfert gratuit des produits (absence de dépenses de transport ou de douane) d'Etat â Etat;

c) l'existence de changes absolument libres et flexibles (absence de manipulation des organismes publics).

Du reste, même ses partisans, comme Haberler, observent que la théorie de la parité du pouvoir d'achat n'est pas valide si elle se réfère à des niveaux absolus des prix, mais seulement si elle se réfère à leurs variations.

Le point le plus faible de la théorie est certainement celui des rapports entre les prix des marchandises qui sont destinées selon le projet à influencer le taux du change. Le problème ne surgirait pas si les deux pays produisaient les mêmes biens, et si tous ces biens étaient échangés effectivement entre les deux pays. Seulement dans ce cas le pouvoir d'achat interne de la monnaie s'identifierait avec son pouvoir d'achat extérieur. Mais cette hypothèse est en tout et pour tout, absurde.

C'est un fait que dans chaque pays il y a beaucoup de catégories de produits qui sont obtenus et consommés exclusivement sur le

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[5]) Un ample examen critique est contenu dans L. Federici: *Teoria dei cambi*, Milano, Ambrosiana, 1946. Federici accepte, cependant, la formule, et la considère valide en un premier examen. Pour des critiques plus radicales, voyez J. Viner: *Studies in the Theory of International Trade*, New York, Harper, 1937. Cap. VI, n. XV: *A Criticism of the Purchasing Power Parity Theory*, pp. 379-387; C. Bresciani-Turroni: *The Purchasing-Power-Parity Doctrine*, dans „L'Egypte contemporaine", 1934, p. 433-464; L. A. Metzler: *Exchange rates at the International Monetary Fund*, dans *„International Monetary Policie"*, Washington, Federal Reserve System, octobre 1947; G. N. Halm: *Monetary Theory*, Philadelphia, Blakiston, 1943. Chap. 13, n. 4; H. G. White: *Foreign Exchange rates and Internal Prices under Inconvertible paper currencies*, dans *„The American Economic Reviews"*, juin 1935, pp. 259-272; Stackelbergh: *The Theory of Exchange Rates under Perfect Competitions*, dans *„International Economic Papers"*, n. 1, London, Macmillan, 1951. Surtout pp. 105-108, etc. Une liste bibliographique exhaustive est contenue dans les *Readings in the Theory of International Trade*, de *l'American Economic Association*, Philadelphia, Blakiston, 1949. pp. 562-585.

marché interne. Or, dans cette situation, pour que cette théorie puisse être considérée valide, c'est-à-dire pour que le pouvoir d'achat interne de la monnaie coincide avec le pouvoir d'achat extérieur, il faudrait admettre que chaque variation des prix des marchandises circulant exclusivement à l'intérieur influe sur le niveau général des prix internes dans la même mesure que les variations des prix desdites marchandises de l'autre marché influent sur leur propre niveau général des prix. Cette coexistence des variations des prix n'existe pas, c'est évident: qu'on réfléchisse en effet à ce fait que la structure des prix d'un pays n'est jamais pareille à celle d'un moment successif ou précédent, parce que les causes qui influent sur chacun d'eux sont diverses.

En effet, le niveau général des prix d'un pays est donné par le prix de toutes les marchandises échangées dans ce pays. De ces marchandises, seulement une partie ont de l'importance aux fins des échanges internationaux. Et seulement ces marchandises, en tant qu'objet des importations et des exportations, concourent à déterminer la demande et l'offre des devises étrangères, c'est-à-dire ont une directe répercussion sur le taux des changes. Toutes les autres peuvent subir les variations des prix, influant, ainsi, sur leur niveau général, sans modifier le cours des changes. D'un autre côté, limiter la théorie aux marchandises seules qui ont un marché international, cela veut dire réduire la thèse à une vérité de La Palisse, étant donné qu'il est évident que les marchandises qui ont un marché international, si l'on fait abstraction des frais de transport, des douanes, etc., ne peuvent avoir qu'un prix unique.

La théorie de la parité des pouvoirs d'achat est viciée dès la prémisse: savoir qu'il n'y a pas des changements considérables dans les situations de base du commerce entre deux pays [6]). Qu'on pense par exemple au cas d'un pays, qui, à la suite de la rupture d'équilibre dans sa balance des paiements, doive limiter les importations de certains produits d'un autre pays. Les consommateurs nationaux, dans cette hypothèse, seront contraints à s'adresser à la production interne et c'est ainsi que des produits remplaçant des produits importés pourront se répandre dans le commerce, produits auxquels le goût des consommateurs s'habituera avec le temps, si bien qu'à la fin ils les préfèreront aux produits étrangers. De cette manière, lorsque la crise provisoire aura été résolue, le pays étranger, pour retrouver un nouvel équilibre, devra, maintenant, réduire les prix des produits qu'il exporte dans ce marché pour faire front à la nouvelle situation.

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[6]) C. P. Kindleberger: *International Economics*, Homewood, Irwin, 1955, p. 71.

Et ceci est un cas dans lequel la variation des prix ne se reflète pas sur le cours des changes [7]).

En outre, sur la balance des payements, c'est-à-dire en définitive sur la demande et sur l'offre des devises influent beaucoup de facteurs qui ne ressentent pas ou qui ressentent d'une manière minime les variations des prix internes, comme par exemple les remises de fonds des émigrés, les intérêts sur les capitaux investis, les prix de location et les primes des assurances, les commissions bancaires, etc.

Les oscillations qu'on observe dans le cours des changes peuvent être corrigées de diverses manières dont le phénomène de la variabilité des prix représente seulement une des nombreuses possibilités. Peuvent intervenir, en effet, au lieu de variations dans les prix, des changements dans le niveau d'occupation, les mouvements de capitaux, des contrôles de devises, des restrictions qualitatives et quantitatives dans les importations, etc.

La littérature économique et l'expérience récente comme les expériences passées ont bien mis en lumière le fait que des déficits persistants dans le bilan des payements peuvent être assainis, plutôt que par des modifications dans le cours des changes, par des endettements envers l'étranger. Phénomène très fréquent, surtout, dans les pays économiquement sous-développés et en phase de croissance [8]) et, donc, ayant besoin pendant cette période de capitaux étrangers. D'autre part, les transferts unilatéraux des moyens de payement, pour des raisons de mouvements de capitaux, pour des réparations de guerre ou pour des aides gratuits, provoquent une variation dans le cours des changes mais peuvent laisser inchangés les prix.

La théorie de la parité des pouvoirs d'achat fait dépendre l'équilibre du change entre deux pays exclusivement du niveau des prix. Pour cette théorie, la demande de devises est fonction exclusivement du prix des marchandises et, lorsqu'elle se base sur l'effet des prix, elle oublie l'effet du revenu. Processus qui, tout en n'étant pas ignoré des classiques, depuis Ricardo jusqu'à Bastable, a été elaboré en profondeur par la théorie moderne depuis Ohlin jusqu'à Aftalion, jusqu'à Robinson, jusqu'à Harrod [9]) et d'autres qui ont pu se servir

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[7]) En tout cas une telle formule n'aurait de valeur que si on supposait que l'élasticité de la demande de tous ces biens est égale à l'unité. Dans tout autre cas, une certaine variation des prix provoquerait une augmentation de la demande plus que proportionnelle, avec les conséquences qui en dérivent.

[8]) Cf. C. P. Kindleberger: *Industrial Europa's Terms of Trade on Current Account, 1870-1953,* dans *„Economic Journal"*, mars 1955, et son volume: *The Dollar Shortage,* London, Chapman, 1950, chap. XXIII.

[9]) Cf. L. A. Metzler: *The Theory of International Trade,* dans *„A Survey of Contemporary Economics,* ed. Ellis, Philadelphia, Blakiston, 1948.

des utiles instruments d'analyse offerts par les formulations de Keynes. On a démontré, ainsi, comment les variations des importations et des exportations provoquent des processus de croissance ou de contraction du revenu nationale, processus qui, à leur tour, étant donné une certaine progression marginale à l'importation et une élasticité de la demande des produits étrangers, se répercutent à nouveau sur le bilan des payements permettant leur rééquilibre, sans qu'il soit nécessaire de faire intervenir le mécanisme des prix ou du change.

La théorie en examen part d'une hypothèse essentiellement statique, elle fait abstraction des déséquilibres cycliques et de structure et suppose l'existence continue d'un régime de pleine occupation [10]).

Du reste les défenseurs de cette thèse eux-mêmes en subordonnent souvent la validité à deux conditions [11]):

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[10]) G. Marcy: *Variations du change et termes de l'échange dans la théorie économique contemporaine,* dans *„Revue d'économie politique"*, 1956, pp. 177-213.

[11]) La validité de cette thèse est soutenue par divers auteurs, qui cependant, reconnaissent l'importance des limitations dont nous avons parlé. Ce sont surtout: C. Ganser et H. Wilhelmi: *Harmonisierung der Steuersysteme in der Europäische Wirtschaftsgemeinschaft, Deutsche Vereinigung für Internationales Steuerrecht,* Herder, 1957, pp. 11—13; Mesenberg: *Zu der steuerlichen Fragen des Europäischen Gemeinsamen Marktes* in *„Europa Archiv"*, 20 — II et 5 — III, 1957, p. 9625. Il affirme avec décision „qu'on ne peut attendre des changes aucune capacité de compensation pour les divergences fiscales en question" (p. 9626). Mesenberg admet entre autres que ces différences peuvent se compenser même si les prix restent fixes, en modifiant le niveau d'occupation ou à travers une manoeuvre des devises. R. Regul: *Wirtschaftsintegration und Steuersysteme,* dans *„Finanzarchiv"*, vol. 16, (1955—56), pp. 322—327; C. S. Shoup: *Taxation aspects of International Economic Integration,* dans *„Aspects financiers et fiscaux de l'integration économique internationale", Travaux de l'Institut des Finances publiques,* La Haye, Stockum, 1953, p. 92; W. Albers: *Steuerprobleme der Montanunion,* dans *„Die Weltwirtschaft", Halbjahresschrift des Instituts für Weltwirtschaft an der Universität Kiel,* 1953, fasc. 2, p. 164 et sq. Aussi V. Rouquet La Garrigue: *Les impôts sur le chiffre d'affaires et leurs relations avec le niveau des prix nationaux en Europe,* dans *„L'Actualité économique"*, octobre— décembre 1956, pp. 447—448, démontre un peu de scepticisme sur la conception automatique du change et surtout à cause du temps que requiert son fonctionnement. Acceptant cette thèse, au contraire, en dévalorisant les limitations dont nous avons parlé, M. Lauré, et surtout dans: *Traité de politique fiscale,* Paris, Presses Universitaires de France, 1956, p. 212; G. Stammati: *Le conseguenze fiscali del Mercato Comune Europeo,* dans *„Nuova Antologia"*, août 1957, pp. 437—439; aussi bien que la Commission gouvernamentale de la conférence de Messine: *Relation du Président de la Délégation aux Ministres des Affaires Etrangères,* Secrétariat de Bruxelles, 21/4/1956, titre II, chap. 2, section I. Une position plus décisivement sceptique a été adoptée par l'Institut „Finanzen und Steuern": *Europäische Wirtschaftsgemeinschaft und Steuerpolitik,* Bonn a. R., 1957, IVe Partie, n. 2. *These von der Ausgleichswirkung des Wechsel-*

— que les changes soient flexibles et non rigides;

— que la formulation de la compensation automatique ait un sens seulement pour la pression fiscale moyenne et cesse d'avoir de la valeur pour chaque cas où un produit échangé avec l'étranger incorpore un montant de taxes supérieur ou inférieur à telle moyenne [12]).

Pour ce qui concerne la première condition, il est nécessaire d'observer que, tant que, dans les pays de l'Europe occidentale persistera une politique de contrôle étroit des changes ou du moins une politique active à leur égard, on ne pourra parler de cours flexibles. Cette première condition, par conséquent, donne un caractère d'irréalité à la position de ce principe et aux conséquences qu'on en veut tirer. D'un autre côté, les différences des prix moyens dans les six Pays ne surpassent pas ces limites au delà desquelles l'écart de niveau entre les pouvoirs d'achat devient si important qu'il détermine inévitablement une oscillation dans le cours des changes, selon les partisans de la théorie bien connue de Cassel.

Pour ce qui concerne la seconde condition, on doit dire qu'elle limite la portée de la thèse beaucoup plus qu'il ne semble à première vue. Même en supposant, à titre de simple hypothèse, valide la théorie de la parité des pouvoirs d'achat, et tout en supposant, toujours à titre d'hypothèse d'étude, l'adaptabilité instantanée dans le cours des changes, au niveau changé des prix, la compensation automatique n'aurait cependant lieu que pour les impôts qui frappent avec le même taux tous les produits et tous les services, dans la phase qu'elles ont atteint au moment de l'exportation. Seulement ainsi, à une augmentation d'un certain pourcentage des prix de tous les biens exportés, suivrait une augmentation correspondante des changes étrangers. Mais si la charge fiscale moyenne par exemple du 10%, résulte de la taxation de certains produits dans la mesure de 25% et d'autres dans la mesure de 5%, les cours des changes augmenteront, dans l'hypothèse avancée, en raison de 10%. Mais un tel ajustement est une mesure insuffisante pour les produits taxés du 25%, lesquels, malgré la compensation partielle des changes, subiront une augmentation des coûts relativement aux produits similaires du 15% tandis que pour ceux taxés du seul 5% représentera une vraie prime à l'exportation, en tant qu'ils bénéfi-

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kurse, pp. 24—27 où sont posées trois conditions: *a)* cette thèse vaut seulement pour de longues périodes; *b)* elle vaut seulement pour les charges moyennes; *c)* elle vaut seulement dans le cas lequel le change se forme selon les principes du marché libre.

12) Limitations sur lesquelles la Commission des Experts fiscaux nommée par la Haute Autorité (présidée par Coppé) a insisté tout particulièrement, elle accepte cependant en plein la thèse en discussion.

cieront d'une augmentation des recettes de 5% en plus de l'augmentation relative. Et, si l'on considère les ordonnances fiscales, au concret, on verra quelle valeur a cette observation pour les pays dans lesquels les impôts indirects spéciaux (accises), ont une influence notable.

Si nous observons les divers inpôts indirects en vigueur dans les six Pays, nous ne trouvons pas d'exemples d'un système d'impôts général et uniforme, système hypothétique imaginé par les partisans de la thèse en discussion.

Avec les impôts spéciaux, seuls certains produits sont soumis à l'impôt, que, pour des motifs techniques (facilité de contrôle) ou fiscaux (consommation très vaste, condition nécessaire à un rendement consistant) se prêtent à ce genre de taxation, laissant exempts d'impôts tous les autres. Et, normalement, les produits soumis à l'impôt sont frappés — pour des raisons évidentes — de taux qui représentent un écart assez important relativement à la moyenne.

A ces qualités requises, dont nous venons de parler, ne répondent pas, certainement, les différents impôts indirects sur les affaires (registre, timbre, sur la publicité, sur certaines affaires, etc.) qui pèsent sans aucun doute sur les coûts de production, en tant qu'ils frappent les entreprises, élévant, cependant, les prix des produits dans une mesure variable selon le secteur, selon l'entreprise et selon le type de l'activité développée, de la structure et de la forme juridique de l'entreprise elle-même et d'autres éléments souvent purement fortuits.

Et, quoique la thèse de la correction automatique des différences de niveau de la charge fiscale à travers le cours des changes ait été présentée, justement en ce qu'elle intéresse l'impôt général sur les ventes, il nous faut remarquer que les conditions nécessaires requises pour qu'un tel processus puisse avoir lieu, nous ne les retrouvons pas dans cet impôt, du moins tel qu'il est organisé en fait dans les six Pays de la communauté et spécialement dans ceux où l'impôt sur les échanges a le caractère d'impôt à phases diverses et cumulatif. Comme on sait, de fait, la caractéristique de cet impôt est de donner lieu à une incidence définitive sur le produit fini, diverse selon les cas.

L'impôt sur les échanges à titre cumulatif frappe les phases de l'échange selon leur pleine valeur et suit le produit ou l'activité imposée de son origine jusqu'au consommateur. Ce système de taxation, même s'il est réalisé avec rigidité et avec un taux uniforme, se transforme en fait, pour ce qui concerne le produit fini, en un impôt à taux différencié.

En effet, avec le système de la taxation successive, une marchan-

dise est frappée, au moment où elle est acquise par le consommateur définitif, d'une charge globale qui est fonction de deux variables: nombre des échanges et augmentation de la valeur à chaque échange successif. Si un bien passe à travers six phases d'échange et un autre à travers deux seulement, il est évident que, à conditions égales, le premier produit payera un impôt triple du second, même en supposant que la valeur finale est la même. D'un autre côté, même si le nombre des échanges est le même pour les deux produits, l'impôt pèsera plus sensiblement sur ces biens dont la valeur augmente plus sensiblement dans les premières opérations du change, tandis qu'il pèsera moins sur ceux dont la valeur augmente surtout dans la dernière phase du cycle productif. Ces conclusions, d'ailleurs, sont bien mises en évidence, lorsqu'on procède à la détermination de la taxe d'impôt „una tantum". Taxes qui divergent, et souvent sensiblement, de produit à produit, mettant en lumière la répartition inégale dont nous avons parlé.

D'un autre côté le produit est taxé d'une manière plus ou moins sensible selon qu'il est réalisé dans des industries concentrées ou s'il doit traverser des cycles divers de transformation. Si un bien est obtenu dans un régime de concentration industrielle, sa transformation sera obtenue avec un nombre d'échanges moindre et en conséquence le produit fini supportera une charge fiscale moindre de celle qui pèse sur le même bien obtenu dans un régime industriel sans concentration.

Seulement le système de l'impôt sur la valeur ajoutée pourrait permettre l'admission d'un tel principe, si le système était réalisé d'une manière radicale et si l'impôt était inspiré du principe de l'uniformité de la taxe, principe pratiquement, mais non nécessairement, violé, même en France.

En fait, donc, l'inexistence d'impôts généraux et uniformes comme cet impôt idéal qui n'est qu'une hypothèse, invalide fortement la thèse selon laquelle le change compenserait automatiquement une difference de niveau des charges fiscales dans les différents pays. En conséquence, la conclusion qui en dérive s'en trouve invalidée elle aussi, conclusion selon laquelle, grâce à cet automatisme réalisant le principe de la taxation sur le marché d'origine, on n'aurait aucune distorsion économique des échanges entre les pays ayant des taxes d'impôt divers.

Nous avons donc écarté la thèse de la correction automatique du cours des changes; le système de la taxation sur le marché producteur qui exclut, donc, toute exemption ou remboursement à l'exportation, et toute imposition de compensation à l'importation peut être realisé sans fausser la concurrence internationale, seulement dans le cas où les divergences des augmentations des coûts déterminés

par les impositions indirectes sont contenues dans des limites modestes. Ce qui veut dire que, si on se limite à considérer les impôts indirects, c'est-à-dire ces impôts qui, d'une manière évidente, tendent à se transferer en avant influant sur le coût de production et sur les prix de vente, le principe de la taxation sur le marché d'origine, principe typique de tout marché interne ou unifié, peut être réalisé seulement à condition qu'on procède au préalable à une harmonisation des systèmes d'imposition indirecte et des taux d'impôt relatifs, en vigueur dans les six Pays de la Communauté, harmonisation qui doit être assez importante, même si elle n'est pas totale.

Ces considérations, d'ailleurs, ne changent pas beaucoup en substance, si nous dirigeons notre attention sur les impôts directs sur le revenu ou sur le capital des entreprises. Là, la distorsion se manifeste, non pas tant sur la concurrence des produits que sur celle des facteurs de la production, dans le sens que, tout en faisant abstraction de ce fait, savoir que de tels impôts agissent très souvent, comme il est démontré dans la littérature la plus moderne, comme des augmentations de coûts, l'imposition directe se présente surtout — et en tout cas pendant des périodes de temps brefs — comme une réduction de la valeur rentable des facteurs de la production. Et alors, en première ligne, l'épargne et, d'une manière plus discrète, le travail, tendront à s'adresser à ces pays où la réduction de la rente, en raison du prélèvement fiscal, est moindre. Et cette fuite des facteurs productifs des pays à haute pression tributaire, vers des pays à basse pression tributaire constitue une évidente distorsion, contraire certainement à l'esprit aussi bien qu'à la lettre du Traité.

Cependant, si la concurrence entre les produits et les marchandises est très sensible à la divergence des prix, les facteurs de la production présentent un degré plus grand de viscosité. Avant que le capital et le travail ne se meuvent, il est nécessaire, même en absence d'obstacles politiques et législatifs, que la divergence de leur rémunération assume des dimmensions d'une certaine importance. Une viscosité plus grande de la concurrence entre les facteurs productifs des différents produits permet que pour ces impôts la nécessité d'une harmonisation se présente avec un degré moindre d'urgence et, seulement dans des cas extrêmes, où l'on pourrait réaliser le principe de la taxation sur le marché d'origine [13]).

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[13]) Ceux qui souhaitent une harmonisation progressive de la legislation fiscale sont: F. Neumark: *Die Budgetaren und Steuerlichen Aspekte einer Wirtschaftlichen Integration*, in *„Aspects financiers et fiscaux"*, vol. cit., pp. 40-45; Ganser: o.c., p. 100 avec référence particulière à l'impôt sur les échanges;

D'un autre côté, pour les impôts sur le revenu ou sur le patrimoine, il est bien difficile qu'on puisse réaliser le principe de la taxation sur la marché de destination ou consommateur, étant donné qu'il n'y a pas la possibilité technique de calculer le montant de l'impôt incorporé dans le coût de production et en conséquence les remboursements à l'exportation et les droits de compensation à l'importation finiraient toujours par masquer des primes ou des droits de douane protecteurs. Il n'y a pas non plus d'autres systèmes techniquement possibles, pour éviter de telles distorsions, sinon procéder à l'harmonisation dont nous avons parlé.

Il n'y a pas de doute que, si les six Pays harmonisaient leurs systèmes tributaires, que ce soit la structure de chaque impôt pris en particulier que celle des taux à appliquer, on pourrait réaliser tranquillement le principe de la taxation sur le marché du pays d'origine, sans craindre des distorsions.

Mais une harmonisation aussi générale, non seulement serait contraire au principe de l'autonomie fiscale des six Pays que le Traité voudrait laisser intacte, mais voudrait signifier pour beaucoup d'Etats une modification radicale de leur structure fiscale. Structure qui est étroitement liée à la structure économique et politique d'un pays. Harmoniser ne veut pas dire seulement renoncer à la réalisation de certaines finalités économico-politiques au moyen de l'instrument fiscal, chose extrêmement importante en cette époque où la finance pure, ayant comme but exclusif la réalisation d'un rendement tributaire, n'existe plus, tant sur le plan logico-scientifique, que sur le plan concret, mais celá veut dire aussi faire abstraction d'un ensemble de traditions, d'exigences et de possibilités morales et psychologiques qui ne peuvent pas être changées rapidement. Les systèmes tributaires, comme il ressort des données statistiques élaborées par la Commission Economique pour l'Europe [14]) réexaminés avec perspicacité par Steve [15]) donnent comme exemple une étroite corrélation (index 0.85 en 1938, index 0,78

H. Mesenberg: *Zu der steuerlichen Fragen,* op. cit., qui se réfère surtout aux impôts de consommation (Verbrauchsteuern, p. 9627) et à ceux sur les échanges (Umsatzsteuer, p. 9629) tandis que l'harmonisation sur les impôts sur la rente et sur le pratrimoine lui semble moins urgente (p. 9630). L'auteur ne cache pas, cependant, les grandes difficultés du problème; K. H. Dronkers: *Taxation Problems and the Common Market* in *„The Accountant"*, 13 juillet 1957, p. 657, tout en souhaitant l'harmonisation des impôts sur le chiffre d'affaires (Turnover Taxes) cependant met en relief les grandes difficultés qu'il faudrait surmonter, et dont il tire motif à scepticisme.

[14]) E.C.E.: *Changes in the Structure of Taxation,* dans *„Economic Bulletin for Europe"*, III quadrimestre 1950.

[15]) S. Steve: *Tendenze delle finanze publiche in Europa,* dans *„Rivista di diritto finanziario e scienza delle finanze"*, giugno, 1952, pp. 101-141.

en 1948) entre le revenu moyen par habitant et la composition du système tributaire. Plus le revenu moyen augmente, plus augmente l'importance des impôts directs. Les systèmes tributaires des six Pays confirment ces tendances.

Voici pourquoi, si on ne veut pas perdre de vue la situation de fait, le problème de l'harmonisation, au moins en ce qui concerne le prochain futur, est à notre avis un problème limité à tel ou tel impôt. Cependant, même en considérant les seuls impôts indirects, et plus specifiquement les impôts de fabrication (accises) dont l'harmonisation est absolument necessaire pour réaliser l'application du principe de taxation sur le marché d'origine, le problème de l'harmonisation fiscale se présente comme insoluble.

En premier lieu subsiste le fait que le poids des impôts indirects (en dehors de l'impôts général sur le chiffre d'affaires), va d'un maximum de 46.?% du revenu national des impôts en Italie à un minimum de 18-19% du revenu national dans le Luxembourg et dans le Pays-Bas.

Comment est-il possible de déplacer une masse d'impôts aussi énorme d'une catégorie d'impôts à une autre? Voici dix années qu'en Italie on fait tous les efforts possibles et imaginables, y compris des réformes tributaires radicales, pour augmenter la contribution des impôts directs aux recettes fiscales globales, mais les résultats jusqu'à aujourd'hui sont pratiquement nuls.

Non seulement; harmoniser les impôts de fabrication, cela veut dire ne pas tenir compte des diverses structures des bilans familiaux, des conditions sociales et des goûts des différentes collectivités nationales. Certains produits de consommation qui ont un caractère populaire dans un pays, peuvent être considérés de luxe dans un autre; niveler leur taxation, cela veut dire provoquer des redistributions du revenu national qui ne sont ni voulues ni désirables. Certains produits peuvent être consommés dans certains pays en quantité moindre de ce qu'on voudrait, et, donc, on pense qu'ils mériteraient un encouragement; pour d'autres, nous sommes à l'opposé. Dans certains pays, certains biens peuvent intéresser de larges couches productives dont on veut sauvegarder le bien-être au moyen d'une politique fiscale de faveur. Dans d'autres pays, étant donné la conformation des goûts de la collectivité, la consommation de certains biens est tellement faible que leur imposition serait absolument inutile. Et nous pourrions continuer à énumérer les raisons pour lesquelles l'imposition de certaines consommations ou productions reflète des situations de milieu, non susceptibles d'extension dans d'autres pays.

L'harmonisation des systèmes fiscaux, donc, pourra suivre, et non pas précéder une certaine harmonisation des structures sociales et

économiques ou un certain nivellement des conditions de vie des différentes collectivités, au fur et à mesure que le marché commun se consolidera dans les économies des six Pays.

Du reste, le Traité s'est rendu compte de cette situation. Il permet, en effet de réaliser le principe de la taxation sur le marché consommateur par les impôts indirects, et il en prévoit même une realisation forfaitaire par l'impôt cumulatif sur les échanges, se rendant compte des difficultés de procéder à des modifications structurelles. Le Traité n'exclut pas la possibilité d'introduire, même, peut-être, dans une seconde phase, l'harmonisation de ces impôts et, pour stimuler ces tendances, plus que pour les imposer, il a disposé de commencer dès maintenant des études dans ce sens. Rien n'est prévu, au contraire, pour les impôts directs où le problème est encore plus complexe mais moins urgent. De cette manière, sans aucun doute, la politique tributaire des six Pays est vouée à une inconnue en ce qui concerne les directives fondamentales à suivre dans les 12 ou 15 années prochaines. Et les motif en sont évidents.

Si, à la fin de cette période transitoire, devaient disparaître effectivement, outre les droits douaniers, toute autre barrière de frontière, établies aux fins de contrôles économiques, alors on ne pourra réaliser que le principe de taxation sur le marché d'origine. Et comme l'harmonisation ne pourra être imposée par les autorités de la Communauté que dans des limites et dans des secteurs circonscrits, il est évident que tous les pays seront stimulés à déplacer leur propre système d'imposition vers les impositions directes, surtout à caractère personnel, ou vers les impôts indirects appliqués au moment de la fin du processus industriel, c'est-à-dire généralisant la taxation sur la consommation au moment ou le produit est prêt à être livré au détaillant.

Si, au contraire, les barrières fiscales ne disparaissent point, l'intérêt pour une imposition personelle sur le revenu et sur le patrimoine demeurant ferme, les différents Etats seront poussés à déplacer l'imposition vers l'impôt général sur les chiffre d'affaires et vers les differents impôts spéciaux de fabrication ou de production, qui permettant de réaliser en plein le principe de la taxation sur le marché consommateur, consentiront aux produits nationaux de se présenter sur les marchés étrangers dans les meilleures conditions.

C'est un fait que c'est demain plutôt qu'aujourd'hui que l'instrument fiscal pourra être usé comme un instrument de politique économique et nous assisterons certainement à une forme de concurrence entre les systèmes tributaires des différents pays pour les rendre plus conformes aux intérêts nationaux dans le cadre du Marché Commun.

Mais, pour éviter des incertitudes au sujet des futures modifica-

tions structurelles des systèmes tributaires, ce serait très bien si les Autorités de la Communauté déclaraient au plus vite et le plus clairement possible si les barrières fiscales peuvent rester en vie, même après la période transitoire, ou non. Une telle éventualité n'est pas d'ailleurs considérée impossible par le Traité et, jusqu'à preuve du contraire on doit donc considérer que déclarer l'incompatibilité de telles barrières et du fonctionnement du marché commun signifie aller au-delà des engagements que les six Etats ont pris en ratifiant le Traité.

FISCAL PROBLEMS OF THE EUROPEAN ECONOMIC COMMUNITY

by Professor CESARE COSCIANI

SUMMARY

With a view to the European Economic Community the problem of different fiscal systems existing on a common market, already dealt with by the European Coal and Steel Community, is again discussed.

One of the arguments put forward by those in favour of the principle of taxation in the country of origin and thus of abolition of any duties on export or import is that the differences in rates and taxes will be automatically compensated through the changes in rate of exchange, without corrective fiscal measures being called for.

In his article the author criticizes this thesis with a number of argumentations. The theoretical and essential limitations required to render this thesis valid are such as to deprive it of any practical and scientific value.

Since compensation through the exchange mechanism cannot be relied upon, the principle of taxation in the country of origin will thus have to be based on a legislative harmonization of all the fiscal systems of the countries taking part in the Common Market.

The author demonstrates that this harmonization is not a real solution either, in view of the divergence of the economic systems of the six countries and of the difference in structure of their trade balances.

Thus, the only choice left to the six countries of the Common Market is to follow the classic road of applying the principle of taxation on the market of destination or consumption.

AN APPLICATION OF LINEAR PROGRAMMING TO PUBLIC FINANCE

by PROF. ITALO CUTOLO

University of Naples

In a recent note Fossati formulates a new mathematical model for application of Linear Programming to public finance [1]).

Following this work, that represents the first trial for the application of L.P. to public finance, some observations are made in this article and it is shown how it can be located in the "Hitchcock problem" [2]).

The model proposed by Fossati is relative to the deduction that the State operates on national income through taxation in a given fiscal year, and the allocation that it operates to satisfy the demand for public services relatively to same year.

The problem connected to this model is to find the *fiscal optimum*, i.e. the determination of the minimum total cost of collection and allocation within some restriction that will be pointed out later.

1. *Formulation of the problem.*

Let us suppose, in the first place, that in a single fiscal year the *stock* on which the public administration operates a deduction is exclusively formed by the national income of that year.

The *input-flow*, as a result of taxation, constitutes the *raw material* from which the public administration derivates the *output-flow* to satisfy the total demand for public services.

If we examine the State in the regions of which it is composed, we can suppose that the total demand for requirements of public services be completely satisfied by raw material of that fiscal year, and that such quantity, obtained from the stock distributed in the single regions, be completely absorbed by the total demand.

We must observe, however, that the rate of national income, that must form the raw material of each region, has to be obtained

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[1]) Eraldo Fossati, *For the Application of Linear Programming to Public Finance*, "Public Finance", n. 2 — 1957, Haarlem, Netherlands.

[2]) F. L. Hitchcock, *The Distribution of a Product from Several Sources to Numerous Localities*, "Journal of Mathematics and Physics", vol. 40, 1941.

from the stock of the same region, and for each collection process, with the limitation of a maximum rate of input-flow of raw material. This maximum expresses the fixed limit of taxable capacity of the stock. Each region, besides, has a fixed demand for raw material.

In this activity of production and allocation of the State considered as an enterprise, it is to be pointed out:

a) a unit cost of production of the raw material, i.e. a unit cost of collection for each region and for each method of deduction;
b) a unit cost of allocation, i.e. a unit cost of transfer of the raw material from one region to another.

It must not be forgotten that as each region is both place of productions and of the demand for the raw material, it must be taken into consideration also the allocation in the same region of a rate of the input-flow originated in that region.

It must be supposed, moreover, that, in the considered fiscal year, the value of the monetary unit remains constant, that the system of taxation and the price of the production factors required remain constant, and besides in each region the unit costs of production and of allocation do not vary.

Once we know the taxable capacities relative to the stock of each region and the demands, measured in terms of raw material, for requirements for public services, following what has already been observed, the problem of the fiscal optimum can be stated as follows:

Determination, in a certain fiscal year, of the best way of deduction and allocation of the raw material with the purpose to minimize the total cost of collection and transfer of the raw material, respecting the constraint that the total demand be exactly satisfied by the raw material which must not exceed, in each region, the limit of taxable capacity of the stock of that region.

2. *Mathematical formulation of the problem.*

a) *The cost function.*

Let us suppose that the State is composed of p regions; in each of them q processes of deduction are made. We have then pq methods of collection and pq unit costs of deduction as each process has its unit cost.

If we then take into consideration the transfers of raw material

from one region to another, taking into account that each region may be, at the same time, production and demand center of raw material, p^2 processes of transfer and consequently a corresponding number of unit costs of transfer are obtained.

It is to be pointed out that the raw material, whatever is the method of collection and the region in which it is produced, has to be considered as a homogeneous good, so that the consumers are indifferent as to its origin.

Now we call:

$\lambda_{rs}^{(h)}$ the rate of national income deduced by method h from the stock of region r and transferred to region s;

$\gamma_{r}^{(h)}$ the unit cost of collection relative to method h in region r;

δ_{rs} the unit cost of transfer from region r to region s;

$c_{rs}^{(h)}$ the unit cost of income collected by taxation process h in region r and transferred to region s.

The unit costs $c_{rs}^{(h)}$ are represented as the sum of unit costs $\gamma_{r}^{(h)}$ and δ_{rs}, i.e.:

$$c_{rs}^{(h)} = \gamma_{r}^{(h)} + \delta_{rs},$$

where $r, s = 1, 2, \ldots, p$ and $h = 1, 2, \ldots, q$.

As the number of transfers is p^2q and the unit costs $\gamma_{r}^{(h)}$ and δ_{rs} are supposed constant, of the same number and equally constant are the unit costs $c_{rs}^{(h)}$.

It follows that the total costs of collection and transfer Z, relative to all the p^2q transfers $\lambda_{rs}^{(h)}$, is given by the sum of the single transfers $\lambda_{rs}^{(h)}$ each multiplied by its unit cost $c_{rs}^{(h)}$, i.e.:

$$Z = \sum_{h=1}^{q} \left[\sum_{s=1}^{p} c_{1s}^{(h)} \lambda_{1s}^{(h)} + \ldots + \sum_{s=1}^{p} c_{ps}^{(h)} \lambda_{ps}^{(h)} \right],$$

or

$$(1) \qquad Z = \sum_{h=1}^{q} \sum_{i=1}^{p} \sum_{s=1}^{p} c_{rs}^{(h)} \lambda_{rs}^{(h)}.$$

The equation (1) represents a *linear function* in p^2q variables $\lambda_{rs}^{(h)}$ as the coefficients $c_{rs}^{(h)}$ are constant. We call it *cost-function.*

b) *Constraint relations.*

From what has been exposed, we can point out that in the problem under consideration there are two groups of constraints, i.e. the former relative to taxable capacities of the stock of each region, the latter relative to the demands of the same regions.

More exactly, we can observe that in each region and for each deduction process must be stated the condition that the sum of the rates of income collected must not exceed the taxable capacity of the stock of the region relative to that taxable method.

Moreover, the sum of the rates transferred into each region must be equal to its demand.

Having supposed the State composed of p regions, and the number of collection methods being q, it follows that the number of the taxable capacities is equal to pq, so that the relative group of constraints is formed by pq relations.

If we call $\alpha_r^{(h)}$ the taxable capacity of the stock of the region r respect to the deduction process h, this group of constraint relations is represented by the following pq inequalities:

$$(2)\quad \begin{cases} \lambda_{r1}^{(1)} + \ldots + \lambda_{rp}^{(1)} \leq \alpha_r^{(1)} \\ \ldots\ldots\ldots\ldots\ldots\ldots\ldots, \quad (r = 1, 2, \ldots, p). \\ \lambda_{r1}^{(q)} + \ldots + \lambda_{rp}^{(q)} \leq \alpha_r^{(q)} \end{cases}$$

where $\alpha_r^{(h)}$ are non-negative constants.

Indicating by β_s the demand in terms of raw material for public services of region s, the second group of constraints is formed, as already stated, by the following p equations:

$$(3)\quad \sum_{h=1}^{q} \lambda_{1s}^{(h)} + \ldots + \sum_{h=1}^{q} \lambda_{ps}^{(h)} = \beta_s, \quad (s = 1, 2, \ldots, p),$$

where β_s are positive constants.

Formulas (2) and (3) constitute toghether $pq + p = p(q + 1)$ constraint relations whose expressions represent *linear function* in p^2q variables.

We must point out, finally, that for the unknowns $\lambda_{rs}^{(h)}$, giving their meaning which excludes negative values, it is required to be satisfied the condition:

$$\lambda_{rs}^{(h)} \geq 0.$$

From what has been shown so far, we can conclude, about the problem of fiscal optimum, that it consists in the *determination of a set of p^2q non-negative values — not all identically equal to zero — of the variables $\lambda_{rs}^{(h)}$ such as to satisfy the two groups of constraint relations (2) and (3), and to give for function Z, as from (1), the minimum possible value.*

Such problem, for the linear character of both the function Z and the two groups of constraint relations (2) and (3), can be solved with the methods of Linear Programming as it will be shown further.

3. *Fiscal optimum in linear programming.*

It is known that every problem of linear constrained max- or minimization can be transformed in such a way as to make possible the application of the model of tipical L.P. that consists in the maximization of a linear function with respect to a system of constraint equations equally linear.

In our case, for the application of such a model, it is necessary to substitute to the minimization of the Z linear function a maximization equally linear, and to transform the pq inequalities (2) into an equal number of equalities.

About the first point, it must be observed that it is sufficient to substitute to $min(Z)$, $max(-Z)$, as the set of values of $\lambda_{rs}^{(h)}$, that gives for Z the absolute minimum, is the same that gives for $-Z$ the absolute maximum, and it is besides $min(Z) = -max(-Z)$.

Multiplying then eq. (1) by —1 and giving $Z' = -Z$, the problem of fiscal optimum consists in the determination of that set of values of $\lambda_{rs}^{(h)}$ which, constrained by fixed condition, may give the maximum possible value for the linear function:

$$(4) \quad Z' = -\sum_{h=1}^{q} \sum_{r=1}^{p} \sum_{s=1}^{p} c_{rs}^{(h)} \lambda_{rs}^{(h)} .$$

This function is different from the (1) only because the coefficients $c_{rs}^{(h)}$, that represent the weights which the variables $\lambda_{rs}^{(h)}$ enter into the Z function, are considered with a negative sign.

For the transformation of the pq inequalities (2) into equations, it is sufficient to add to the first member of each of them a convenient *positive* quantity, so that this member may result equal to the corresponding second member.

Calling $\mu_r^{(h)}$ such quantity, where $r = 1, 2, \ldots, p$ and $h = 1, 2, \ldots, q$, it can write:

$$(5) \quad \begin{cases} \lambda_{r1}^{(1)} + \ldots + \lambda_{rp}^{(1)} + \mu_r^{(1)} = \alpha_r^{(1)} \\ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots, \quad (r = 1, 2, \ldots, p). \\ \lambda_{r1}^{(q)} + \ldots + \lambda_{rp}^{(q)} + \mu_r^{(q)} = \alpha_r^{(q)} \end{cases}$$

As for the quantities $\mu_r^{(h)}$, that are usually differently called, we shall use the definition "slack variables".

They do not enter into the Z' function to maximize, or enter with zero weight. We can say that they represent the rates of national income that potentially form rates of raw material.

For the quantities $\mu_r^{(h)}$, both the collection unit cost and transfer unit cost are to be considered zero, given that, as stated before, the weight with which they enter into the Z' function is zero.

The new constraint equations (5) together with the (3) form a system of $pq + p$ linear non homogeneous equations in the p^2q unknowns $\lambda_{rs}^{(h)}$ and in the pq "slack unknowns" $\mu_t^{(h)}$.

The constraints coefficients, with which the $p^2q + pq$ variables $\lambda_{rs}^{(h)}$ and $\mu_r^{(h)}$ enter into such a system, have value equal to 1 or 0; in each equations, indeed, do not appear all the $p^2q + pq$ unknowns, and those which enter into the equation have all coefficient 1.

It is finally to be observed that the number of equations is less than the number of variables, as it can be controlled, and an optimum solution of the problem will contain at the most $pq + p$ positive values and as many negative values as are necessary to complete the number of variables, i.e. $p^2q + pq$.

To conclude, we can say that the problem of the fiscal optimum consists in the *determination of a set of* $p^2q + pq$ *non-negative values of which at the most* $pq + p$ *positive and the others equal to zero, such as to verify the equations of the system formed by the eq. (5) and (3) and give for the* Z' *function (4) the greatest possible value.*

4. *Solution according to the Hitchcock model.*

Indicating by R_r $(r = 1, 2, \ldots, p)$ the p regions that compose the State, we consider the p^2q *variables* $\lambda_{rs}^{(h)}$ and the pq slack variables $\mu_r^{(h)}$.

We order, then, those variables in a matrix form with pq rows and $p + 1$ columns, forming the following table where are shown even the pq taxable capacities $\alpha_r^{(h)}$ and the demands β_s.

TABLE OF THE VARIABLES

taxable methods	from \ to	$R_1 \dots R_p$	slack variables	taxable capacities
1	R_1	$\lambda^{(1)} \dots \lambda^{(1)}_{1p}$	$\mu^{(1)}_1$	$\alpha^{(1)}_1$
	.	.....	.....	.....
	.	.....	.....	.....
	.	.....	.....	.....
	R_p	$\lambda^{(1)}_{p1} \dots \lambda^{(1)}_{pp}$	$\mu^{(1)}_p$	$\alpha^{(1)}_p$
.	.	.....	.	.
.	.	.....	.	.
.	.	.....	.	.
q	R_1	$\lambda^{(q)}_{11} \dots \lambda^{(q)}_{1p}$	$\mu^{(q)}_1$	$\alpha^{(q)}_1$
	.	.....	.....	.....
	.	.....	.....	.....
	.	.....	.....	.....
	R_p	$\lambda^{(q)}_{p1} \dots \lambda^{(q)}_{pp}$	$\mu^{(q)}_p$	$\alpha^{(q)}_p$
	regional demands	$\beta_1 \dots \beta_p$	σ	$\sigma + \Sigma\beta_s = \Sigma\alpha^{(h)}_r$

The sum of the rates $\mu^{(h)}_r$, that we call σ and whose value is given by:

$$\sigma = \sum_{r=1}^{p} \alpha^{(h)}_r - \sum_{s=1}^{p} \beta_s, \ (h = 1, 2, \dots, q),$$

represents a rate of national income, to be collected through the existing system of taxation, to satisfy an additional demand equal to σ.

If we sum by rows the variables of the preceding table, we obtain eq. (5) that constitute the first set of constraints; if we sum them by columns, we obtain eq. (3), i.e. the second set of constraints, plus the equation:

$$\sum_{r=1}^{p} \mu^{(h)}_r = \sigma, \ (h = 1, 2, \dots, q).$$

This equation, as a consequence of the others, cannot be taken into consideration, so that the system of constraints remains constituted by $pq + p$ independent linear equations in the two sets (5) and (3).

We observe now that, as we obtain such equations by the sum of the variables of the above mentioned table first by rows and then

by columns (excluded the one of $\mu_r^{(h)}$), our problem is of the "cross-constraints" type and can be solved according to the "Hitchcock model".

For such a purpose, having disposed in matrix form even the weights $c_{rs}^{(h)}$ in the same order of the corresponding variables, and determined a "basic-solution", whatever we can follow the "simplex method" until an optimum solution is reached [3]).

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[3]) Cf. G. B. Dantzig, *Application of the Simplex Method to a Transportation Problem*, "Activity Analysis of Production and Allocation", New York, 1951, Chapter XXIII.

A. Charnes, W. W. Cooper, *Transportation Scheduling by Linear Programming*, Carnegie Institute of Technology, 1953.

I. Cutolo, *Programmazione lineare*, edit. Treves - Leo Lupi, Napoli, 1957.

UNE APPLICATION DE LA PROGRAMMATION LINEAIRE DANS LA FINANCE PUBLIQUE

par le Professeur ITALO CUTOLO

RÉSUMÉ

L'auteur, en reprenant une note de Fossati sur la formulation d'un modèle mathématique pour l'application de la Programmation Linéaire dans la Finance Publique, ayant fait des observations sur la structure de ce modèle, montre comme il rentre dans le bien connu schème du problème de Hitchcock.

Le modèle formulé par Fossati, que représente un premier essai d'application de la P.L. dans la F.P., concerne le prélèvement que l'Etât fait sur la rente de la Nation au moyen de la taxation, sur une particulière année fiscale, et l'affectation que de ce prélèvement l'Etât même fait pour satisfaire la demande pour les nécessités des services publiques.

Il s'agit d'un problème d',,optimum fiscal'' consistant dans la détermination du meilleur système de prélèvement et de distribution à la fin de réduire au minimum le coût total sous conditions particulièrement obligées.

FISCALITE ET DEVELOPPEMENT DU SAHARA

par P. FONTANEAU

Université d'Alger [1])

INTRODUCTION.

Jusqu'aux découvertes minières et énergétiques des dernières années, il eût été difficile d'attribuer au Sahara le qualificatif de sous-développé, car, sur la base d'une comparaison avec ce qui pourrait être, ce terme semble devoir impliquer l'existence de richesses potentielles. Il est maintenant prouvé que le Sahara possède de telles richesses: pétrole, fer, etc...., le Sahara est donc une région sous-développée.

Mais les matières premières ne constituent que l'un des éléments d'une mise en valeur, le capital en est un autre. Or le Sahara est, peut-on dire, entièrement vide de capitaux. L'extrême pauvreté de ses rares populations ne permet pas, en effet, la formation d'épargne et lorsque ces populations parviennent à en constituer, elles ne l'investissent pas mais la transforment en capitaux improductifs: bijoux, armes, etc., comme le font nombre d'indigènes de pays sous-développés. Les capitaux, monétaires et techniques, nécessaires à la mise en valeur du Sahara, ne peuvent donc être fournis par ce dernier qui doit faire appel à des investisseurs extérieurs pour réaliser son développement. Et dans les décisions des capitalistes d'investir dans telle ou telle région, la fiscalité en vigueur, élément essentiel du coût de production, compte comme un facteur important. A ce titre, la fiscalité saharienne conditionne la mise en valeur du Sahara.

Etant donné l'inexistence à peu près totale d'activité économique que connaissait le Sahara avant les découvertes énergétiques et minières, on aurait pu supposer que le vide du désert s'étendait à la fiscalité, autrement dit que cette dernière était sinon inexistante, du moins rudimentaire et légère aux manifestations de la vie économique moderne comme le sont par exemple des droits de capitation encore fréquents dans les régions arriérées. Or, dans

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[1]) L'auteur de cet article publiera à la fin de l'année 1958 un livre sur la fiscalité saharienne (Editions de l'Epargne).

le Sahara algérien — objet de notre étude — une fiscalité complexe et lourde existe et est prête à peser sur toute activité se déroulant sur ce sol. Cette anomalie s'explique par des raisons historiques tenant aux particularités de l'administration du Sahara.

En effet, du point de vue de l'organisation administrative, nous trouvons, non point un, mais trois Saharas français: celui de l'Algérie — composé des territoires de Touggourt, Ghardaïa, Aïn-Sefra et des Oasis — celui de l'AOF, celui de l'AEF. Mais, le 10 janvier 1957, est intervenue une loi créant une Organisation Commune des Régions Sahariennes (O.C.R.S.). Cette loi n'a pas unifié l'organisation administrative saharienne, car l'OCRS se superpose à ce qui préexistait et qui n'a pas été aboli. Toutefois, sur le plan fiscal, l'OCRS dispose de certains pouvoirs, limités d'ailleurs, par l'article 4 de la loi, à des modifications du régime douanier et du régime des investissements et à l'institution de régimes fiscaux exceptionnels de longue durée. Pour le moment, l'OCRS n'a pas créé une fiscalité propre aux régions sahariennes et les fiscalités en vigueur dans les régions de rattachement demeurent donc les régimes de droit commun des zones sahariennes respectives, en l'espèce celui de l'Algérie, sous réserve de quelques particularités, pour la partie du Sahara qui est l'objet de notre étude.

Le droit positif du Sahara n'a donc pas été conçu pour susciter l'implantation d'investissements et l'on peut craindre que son cadre institutionnel ne constitue un obstacle à son développement. Il est en effet essentiel pour lui de disposer d'une législation fiscale particulièrement favorable à l'incitation à investir, car c'est le moyen essentiel qu'il a de s'aligner sur les autres pays offreurs de matières premières. En effet, le marché international est actuellement un marché de vendeurs. Ce sont les demandeurs qui imposent leur loi et les offreurs de capitaux, vu leur rareté, sont en mesure d'exiger des conditions particulièrement favorables. Les pays producteurs de matières premières sont donc contraints pour attirer les investissements de les faire bénéficier de faveurs fiscales. Une législation rationnellement conçue devrait répondre à de tels critères, mais le droit positif peut n'y pas répondre. Et il est intéressant de savoir dans quelle mesure le système fiscal saharien offre aux investisseurs le vide fiscal que ceux-ci peuvent désirer [1a]).

[1a]) Un code de hydrocarbures sera bientôt publié. Il modifiera sans doute certains de nos développementes. Nous en rendrons compte dans un prochain article.

I. *Le Sahara demandeur de capitaux devrait pratiquer le vide fiscal.*

Le Sahara doit, nous l'avons vu, importer tous les capitaux dont il a besoin. Il se situe parmi les pays offreurs de potentialités économiques mais demandeurs de capitaux. Or, nombreux sont les pays et régions présentant ces caractéristiques. Il y a tout d'abord l'ensemble des pays sous-développés. Il y a ensuite certaines régions sous-développées des pays qui sont, dans leur enemble, considérés comme développés, tels, entre autres, le Mezzogiorno italien, le Centre et le Sud-est de la France. Enfin, les occasions d'investir ne manquent pas, même dans les régions hautement développées. Elles y sont même parfois particulièrement attrayantes par suite du jeu des nombreuses complémentarités qu'offre souvent le développement économique. Les occasions d'investir et, partant, les demandes de capitaux sont donc particulièrement nombreuses et importantes, tandis que l'offre de capitaux, comme de techniciens, d'ailleurs, est relativement limitée.

L'investisseur privé pour qui la fiscalité entre en ligne de compte se voit donc offrir un large éventail de choix et il peut faire jouer la concurrence entre les demandeurs de capitaux. Lorsque ceux-ci — comme c'est le cas du Sahara — sont des offreurs de matières premières dont l'emploi est essentiel à l'activité économique moderne, ils disposent évidemment d'atouts sérieux dans cette lutte économique et financière. Mais, même sur ce point, il sont exposés à la concurrence. C'est ainsi que, à l'intérieur de l'Union française et sur le seul plan énergétique, s'offrent des choix entre les sources concurrentes de la Métropole et de l'Outre Mer: charbon, gaz naturel, énergie marée-motrice, énergie hydro-électrique etc.

En conséquence, les pays sous-développés qui ont opté, par choix politique, pour le développement à partir de capitaux étrangers — choix qui est, pour le Sahara, une nécessité — se livrent à une sorte de surenchère des avantages susceptibles d'attirer chez eux les capitaux nécessaires à leur développement. Dernier venu dans le cercle des pays demandeurs de capitaux, le Sahara ne pourra pas éviter de faire de même. Pour séduire les capitaux extérieurs, ces pays disposent de toute une gamme de techniques monétaires, financières et autres. La technique du „vide fiscal" est l'une d'entre elles. Elle est pratiquée par tous les pays sous-développés désireux d'attirer chez eux les capitaux nécessaires à leur développement et qui créent une différence de pression fiscale

entre eux et les autres régions ou pays, notamment ceux qui sont susceptibles d'exporter des capitaux.

Les pays exportateurs de capitaux sont en général des pays développés à structure fiscale complexe et à forte pression fiscale. Il semble donc relativement facile de créer, par rapport à eux, une zone de dépression fiscale; le terme de zone peut s'entendre d'un point de vue géographique ou d'un point de vue spécifique, c'est-à-dire s'appliquer, soit à une aire spatiale, soit à un secteur économique. Mais pour que l'avantage fiscal concédé atteigne son seuil d'action, il ne suffit pas qu'il aboutisse à ce que la charge fiscale du pays qui veut se développer constitue une fraction plus ou moins petite des charges fiscales, soit du pays exportateur de capitaux, soit des autres pays demandeurs de capitaux.

La question est plus complexe, car il faut considérer les impôts comme l'un des éléments du coût de production; et c'est ce dernier qui va être décisif dans la résolution d'entreprendre ou d'écarter la nouvelle activité. En effet, de l'évaluation des éléments le composant va découler la prévision de l'apparition d'un bénéfice ou d'une perte par comparaison avec le prix de vente prévisible [2]). Ainsi donc le seuil d'action du vide fiscal va dépendre, outre de l'importance de l'avantage fiscal concédé, des montants des autres éléments du coût de production. Un pays où la main d'oeuvre, l'énergie et les prix des terrains seraient remarquablement bon marché, n'aurait sans doute pas besoin de pratiquer la politique du vide fiscal, les avantages retirés de ces conditions suffisant pour attirer les capitaux étrangers. N'en aurait peut-être pas non plus besoin un pays où tous ces éléments qui entrent normalement dans les coûts de production seraient tellement onéreux que même la suppression de toute fiscalité ne compenserait pas la surcharge qui en découle.

En fait, la politique du vide fiscal est largement pratiquée par nombre de pays qui veulent se développer, mais les formes qu'elle

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[2]) La fréquente rareté — nous entendons ce terme dans son sens relatif de demande supérieure à l'offre — des produits offerts par les pays sous-développés — et nous avons vu que le Sahara rentrait dans ce cas — constitue un de leurs atouts dans ce jeu économique qui conditionne en dernier lieu le partage, entre pays offreurs des matières et pays offreurs des capitaux, des bénéfices de la nouvelle activité. Cet atout peut d'ailleurs être contrebalancé par la position monopolistique ou oligopolistique que se sont assurée les pays développés en telle ou telle production, en matière pétrolière, par exemple.

revêt sont diverses, quant à leur étendue, leur importance et leur durée.

En ce qui concerne l'étendue du vide fiscal, on pourrait le considérer comme absolu dans un pays qui détaxerait toutes les manifestations et les résultats d'activités économiques. Ceci constitue une limite qui, de notre temps, appartient au domaine de la théorie. Assez rares, même, sont les pays qui pratiquent une détaxation qui s'étende à tous les investissements réalisés sur leur territoire. On peut citer les Philippines, où une industrie qui se crée est exonérée de tout impôt pendant les premières années de son fonctionnement, ainsi qu'Israël où ce résultat est atteint par la tolérance d'un amortissement particulièrement accéléré. La justification économique de telles mesures réside dans le fait que tout investissement concourt, par ses effets tant directs (obtention du produit ou prestation du service en vue duquel il a été fait) qu'indirects (jeux du multiplicateur et de l'accélérateur notamment) au développement du pays. Une justification également valable est d'ordre psychologique, de propagande, peut-on dire: par une telle mesure, un pays fait montre de réalisme. Il prouve qu'il entend consentir sans marchander les sacrifices nécessaires pour promouvoir son développement.

Mais le plus souvent, les pays sous-développés pratiquent une politique discriminatoire et ne détaxent que certains investissements et activités déterminés. Au Mexique, par exemple, seules les industries „nécessaires", „rentables" ou „d'importance fondamentale" sons exonérées. Des formules aussi vagues laissent une marge de choix dans les décisions particulières aux différents cas. Gardant un pouvoir d'appréciation, le Gouvernement conserve ainsi un atout dans les discussions avec les offreurs de capitaux. Par contre, l'effet de propagande est amoindri. A l'inverse du Mexique, Porto-Rico avertit franchement les investisseurs de l'étendue du vide fiscal, puisque y est dressée une liste des industries pouvant donner lieu à exonération.

Une troisième méthode est employée: pas de mesure d'ordre général, mais discussion entre le gouvernement et les investisseurs et conclusion de contrats pour chaque cas particulier. Cette méthode convient évidemment aux activités essentielles pour le pays. Ainsi elle est prátiquée en matière pétrolière. L'Aramco Oil Co et l'Arabie Séoudite, d'une part, l'Irak Petroleum Co et le Gouvernement Irakien, d'autre part — pour ne citer que ces deux exemples —

sont liés par contrat qui fixe le montant de la somme, généralement proportionnelle à la production, que la Compagnie pétrolière versera au Gouvernement. Cette obligation revêt d'ailleurs un caractère sui generis, car, constituant la seule obligation monétaire [3]) de la Compagnie, elle tient autant de l'impôt que de la redevance foncière. Etant donné en plus les caractères particuliers de ce genre d'exploitation (fixation d'un prix mondial du pétrole, forme intégrée des entreprises, modalités oligopolistiques de ce secteur industriel et surtout degré plus ou moins poussé d'entente des Compagnies entre elles et des Gouvernements entre eux pour présenter ou non un front uni aux exigences de l'autre partie au contrat [4]), il paraît difficile de dire si ce sont véritablement là des cas de détaxation, car il n'y a guère de points de repère valables pour en juger. En tout cas, moins encore en cette matière qu'en aucune autre, un pays sous-développé possédant des richesses pétrolières peut débattre et peser les conditions financières du développement de cette activité sans tenir compte de ses concurrents.

L'importance du vide fiscal se juge au nombre des impôts supprimés et surtout au poids dont ils auraient pesé. Les exonérations fiscales et la valeur qu'on y peut attacher dépendront évidemment du système fiscal considéré. Dans les pays où la fiscalité, imitée de celle des anglo-saxons, accorde une large place aux impôts sur le revenu, il conviendra de faire de ces derniers le siège de la détaxation, si on veut la rendre efficace. Tel est le cas de l'Inde où des industries nouvelles sont exemptées d'Income Tax pour 5 ans dans la limite de 6% du capital investi. En France, au contraire, c'est la fiscalité dite indirecte qui, récemment, a favorisé avec efficacité les investissements par l'institution de la taxe sur la valeur ajoutée. Et il ne semble pas à première vue qu'il y aurait inconvénient à étendre cette institution fiscale aux régions d'Outre-mer dont la fiscalité est calquée sur la fiscalité française et qui ont, du fait de leur sous-développement, encore plus besoin que la Métro-

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[3]) Les Compagnies sont généralement astreintes à d'autres obligations telles l'établissement et l'entretien de certains services publics, l'emploi d'un certain pourcentage de main d'oeuvre indigène, etc., prestations en nature qui entrent, en sus de la redevance, dans les coûts de production.

[4]) Pour des détails sur ces points, cf. „Le Rôle des transports d'énergie dans le développement économique et social" par E. Vessillier, Rapport présenté à la session de novembre 1957 de l'Institut d'Etudes du développement Africain.

pole, de favoriser les investissements. La fiscalité locale qui pèse parfois assez lourdement sur l'activité industrielle et commerciale ne devra éventuellement pas être oubliée dans les mesures d'exonération totale ou partielle.

Pour estimer la valeur de la faveur fiscale consentie, il ne suffit pas d'ailleurs de prendre en considération l'abaissement — pouvant aller jusqu' à la suppression — du taux de l'impôt. Des procédés plus subtils de détaxation peuvent être imaginés, ayant notamment trait à l'évaluation ou au traitement de la valeur imposable. L'un des plus couramment utilisés est la technique d'amortissement accéléré qui, en Inde, par exemple, renforce la détaxation proprement dite.

Les droits de douane constituent souvent une partie importante de la fiscalité des pays sous-développés. Leur abaissement est un des aspects de la politique d'aménagements fiscaux. Mais sur ce point le problème se pose en Algérie tout autrement qu'ailleurs, par suite de l'union douanière avec la Métropole. Toutefois, cette dernière ne pouvant assurer ni son approvisionnement complet en biens capitaux, ni l'écoulement de tous ses produits — et ce, de plus en plus au fur et à mesure de son développement — le problème ne se pose pas moins, renouvelé qu'il est par l'institution du Marché Commun.

La dernière modalité importante du vide fiscal est sa durée. L'investissement est, par essence, un acte dont les conséquences se déroulent à terme et souvent à long terme. La garantie de durée du vide fiscal est donc essentielle. Il n'est toutefois pas concevable que le pays se prive à jamais de toute rentrée fiscale sur une activité déterminée. L'exonération fiscale, sous quelque forme qu'elle apparaisse, comporte donc toujours un terme. L'étendue de ce terme doit concilier les exigences des investisseurs étrangers et les besoins budgétaires des Gouvernements.

Pour ce qui est des investisseurs, il faut évidemment tout d'abord tenir compte du temps mort des investissements c'est-à-dire du temps où ils ne procurent pas de bénéfices à ceux qui les ont réalisés. Ne pas taxer leurs activités durant tout ce temps ne constitue pas à proprement parler une faveur: c'est l'application d'un simple principe de justice fiscale. Une telle justice est automatiquement respectée quand l'imposition a lieu au titre du profit puisque, de toute façon, elle attend son apparition pour peser sur l'activité dont il découle. Il peut en être autrement quand il s'agit, par exem-

ple, d'impôt sur les transactions dont la réalisation peut précéder d'assez loin l'apparition d'un bénéfice. Là encore, la technique d'application du vide fiscal relativement à sa durée va dépendre des impôts dominants du système fiscal considéré.

Mais la durée souhaitable du vide fiscal va également et de manière très étroite dépendre de l'activité considérée, ce qui incite à pratiquer la spécificité de la détaxation. La durée du temps mort, puis l'allure de la courbe de croissance des bénéfices varient considérablement suivant l'activité économique poursuivie. La durée de l'avantage fiscal doit en tenir compte pour, d'une part, revêtir quelque efficacité, mais, d'autre part, ne pas faire peser sur le pays d'inutiles sacrifices budgétaires. Dans la gamme des termes choisis, cinq ans apparaissent comme un minimum. Au Mexique, les exonérations fiscales s'étagent entre 5 et 10 ans. En Algérie, les exonérations en matière de bénéfices industriels et commerciaux attribuées aux entreprises agréées au plan d'industrialisation étaient de 5 ans jusqu'au décret du 31 janvier 1958 qui, entre autres mesures favorables à l'industrialisation, en a porté le terme à 10 ans. Le décret français du 13 novembre 1956 prévoit qu'en Afrique noire elles peuvent atteindre 25 et même 30 ans. En matière pétrolière, certaines conventions portent le terme de leur validité à 60 ans.

Cette garantie de durée n'est pas tout de même absolue. Un renversement de la politique fiscale dû à un bouleversement politique peut survenir et anéantir les avantages consentis et il faut bien reconnaître qu'aucune garantie ne peut prémunir contre un tel risque. Mais, s'il n'y a guère de garantie, il y a une sanction et l'on peut certainement imputer aux manques de parole fiscale répétés et aux ruptures unilatérales de contrat le peu d'empressement à investir dans les pays sous-développés. Ces pays paient donc chèrement et dans le long terme — par leur stagnation ou leur développement à un rythme bien inférieur à celui que permettraient leurs ressources naturelles — les quelques avantages matériels que certains d'entre eux ont recueillis lors de la confiscation des gages que constituaient les installations de biens capitaux érigées sur leur sol par des investisseurs étrangers.

De cette brève étude théorique et comparative des politiques de vide fiscal ressortent deux faits: généralité de son application, mais diversité de ses modalités; cette diversité tient essentiellement d'une part à la diversité des systèmes fiscaux, d'autre part à la diversité

des productions encouragées, lesquelles dépendent et des richesses naturelles et de la politique économique générale des pays [5]).

Voyons maintenant si la fiscalité positive du Sahara algérien répond aux normes que nous avons dégagées.

II. *La fiscalité saharienne ne connaît pas suffisamment la politique du vide fisal..*

La fiscalité du Sahara algérien comporte tout d'abord l'imposition directe des revenus, imposition qui se réalise en deux stades: chaque source de revenu est séparément frappée par une cédule à caractère réel accentué, puis l'ensemble des revenus est ensuite imposé par un impôt complémentaire personnel — à caractère familial et à taux progressif. Le cadre fiscal du Sahara algérien ne se différencie en cette matière des autres fiscalités similaires que par le fait qu'une catégorie de revenus échappe à l'imposition cédulaire, ceux relatifs à la propriété foncière non bâtie; deux cédules sont ainsi supprimées: la contribution foncière sur les propriétés non bâties qui pèse sur les revenus de la propriété de la terre et l'impôt sur les bénéfices agricoles qui pèse sur les revenus de l'exploitation de la terre. Figurent à leur place les deux seuls impôts sahariens indigènes d'ailleurs archaïques: l'impôt Lezma et l'impôt Zekkat qui frappent la terre et le cheptel, c'est-à-dire les deux sources traditionnelles de richesse de ces régions.

Le capital n'est pas frappé, au Sahara, par un impôt général et périodique; on trouve d'ailleurs rarement un tel impôt dans les systèmes fiscaux modernes. Mais il est par contre l'objet de diverses impositions, notamment lors de transferts globaux ou partiels de la fortune immobilière et mobilière et lors des mouvements du capital des sociétés commerciales. Le soin de cette catégorie d'impositions est confié à l'administration de l'Enregistrement. Or, cette administration fiscale a des origines françaises fort anciennes. Le régime des impôts qui sont de son ressort est le fruit de toute une évolution largement influencée par les règles des droits civil et commercial, droits qui régissent la plupart des situations donnant lieu, en France, à l'imposition par l'Enregistrement. Pour ces impôts, moins encore

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[5]) Pour une étude plus approfondie de la détaxation des Investissements nous nous permettons de renvoyer le lecteur au premier de nos deux „Essais sur les Investissements" Librairie Ferraris - Alger - 1957.

que pour d'autres, se justifie la transposition, à un pays d'histoire et de traditions foncièrement différentes, d'institutions à lointaines origines. Et cependant, aucune tendance à l'individualisation du régime saharien ne se manifeste pour ces impôts.

La dépense, troisième — après le revenu et le capital — manifestation économique imposable, n'a pas été oubliée dans le système fiscal algéro-saharien. Elle y est frappée, d'une part par un impôt général, la taxe à la production; d'autre part, par des impôts particuliers ou contributions indirectes qui frappent essentiellement les boissons, le tabac et les transports routiers; l'impôt sur les carburants est supprimé pour les produits pétroliers consommés en zone saharienne. Toutes les techniques d'imposition des affaires — qui présentent chacune avantages et inconvénients qui leur sont propres [6]) — se révèlent d'une application assez complexe et diversifiée par laquelle elles s'efforcent surtout de préserver leur rendement — car elles sont, du moins dans les systèmes fiscaux d'inspiration française, l'un des principaux pourvoyeurs des budgets — tout en évitant de provoquer des conséquences économiques fâcheuses. La taxe unique à la production algéro-saharienne ne fait pas exception à la règle. En dépit de plusieurs efforts de simplification, son régime se diversifie à nouveau, notamment au fur et à mesure de l'institution de mesures destinées à promouvoir l'industrialisation de l'Algérie et du Sahara.

La taxation de la production des biens se double, en général, d'une taxation des prestations de service. Une telle taxe fut effectivement introduite dans le système fiscal algéro-saharien, en même temps que l'était la taxe à la production, c'est-à-dire en 1937. Mais, depuis 1947, son produit bénéficie aux communes; elle est le principal aliment de leurs budgets, les autres taxes locales ne revêtant que peu d'importance.

Enfin, en matière de fiscalité extérieure, le principe de l'Union douanière prive l'Algérie et le Sahara de la possibilité de se constituer une fiscalité extérieure qui leur soit propre; or, les régimes douaniers de pays sous-développés diffèrent, en général, assez profondément de ceux de pays développés. Mais il est juste de

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[6]) Pour la valeur comparée des diverses techniques d'imposition des affaires, cf. l'étude de M. Campet „Le régime fiscal du chiffre d'affaires" - OECE - Paris - nov. 57.

prendre aussi en considération les avantages économiques, d'ailleurs réciproques, que ces régions tirent de cette union avec la Métropole. Toutefois, les entorses consenties au principe de l'Union, notamment en faveur du Sahara et qui consistent en une franchise d'importation de certains matériels d'équipement destinés à des entreprises agréées par le BIA marquent une tendance particulièrement opportune à adapter cette fiscalité à la situation économique et financière des régions considérées.

Mais dans son ensemble la fiscalité actuellement en vigueur dans la zone algérienne du Sahara est la fiscalité de l'Algérie, sous réserve de modalités particulières. Or, le système fiscal algérien est calqué sur l'ancien système fiscal français — celui d'avant les réformes de 1948 pour l'impôt sur le revenu et de 1954 pour l'impôt sur la production.

La fiscalité saharienne constitue donc, à première vue, un véritable paradoxe: elle consiste en l'application à une région sous-développée et présentant des conditions naturelles et démographiques particulières, d'impôts qui sont certes ceux d'une autre région également sous-développée, mais à structure économique fort différente de celle du Sahara et qui, en plus, s'inspirent étroitement de la fiscalité d'un pays développé situé dans une zone géographique et climatique différente et à un autre stade de civilisation sociale.

Voyons si les particularités que présente la fiscalité saharienne par rapport au système fiscal dont elle est inspirée apparaissent ou non favorables à la réalisation d'investissements; en d'autres termes, si elles se rapprochent des normes que nous avons posées comme devant être celles d'un pays demandeur de capitaux et que nous avons réunies sous le vocable de „politique du vide fiscal".

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Il est certain que la scission entre les systèmes fiscaux, métropolitain d'une part, algéro-saharien de l'autre, a été favorable à ce dernier sur un point important de la législation fiscale: le poids des impôts sur les bénéfices des sociétés. En effet, à partir de la date de cette scission, soit depuis l'année 1949, c'est à un mouvement en sens inverse que l'on assiste en matière de fiscalité des sociétés d'un côté et de l'autre de la Méditerranée. En France, les taux n'ont cessé de croître avec parfois des aménagements favorables

aux contribuables en matière d'assiette, telle l'admission d'amortissements accélérés, la décote sur stocks, récemment réduite d'ailleurs, etc. Mais de telles mesures qui n'ont pas toujours d'équivalent en Algérie ne peuvent compenser le fait qu'en 10 ans — de 1948 à 1958 — le taux général d'imposition des revenus des sociétés a doublé, passant de 24% — taux de droit commun applicable avant la réforme de 1948 aux bénéfices industriels et commerciaux — à près de 50% fin 1957.

Au contraire, en Algérie et au Sahara, si le taux général de l'impôt sur les B.I.C. est de même ordre que le taux métropolitain en 1948, soit 25%, les mesures d'exception prises l'ont été dans le sens d'un allègement fiscal: des détaxations peuvent être accordées sur agrément des entreprises au Plan d'industrialisation pour l'ensemble de l'Algérie ou par le Bureau Industriel Africain (B.I.A.) pour le seul Sahara algérien. Sur ce dernier point, la méthode adoptée est particulièrement souple et sélective, puisque l'importance et la durée du „vide fiscal" fixées par arrêté gubernatorial (exemption de l'impôt sur les B.I.C. jusqu' à concurrence d'un pourcentage du montant des investissements) peuvent varier avec chaque nature d'activité.

En matière d'impôt sur la production, la scission avec la Métropole a eu des conséquences diverses. Pour ce qui est des taux, une évolution similaire à celle de l'impôt sur les sociétés s'est produite. Le taux général métropolitain qui était de 10% en 1948 est encore actuellement le taux général algéro-saharien. Ce dernier n'a pas suivi la hausse des taux qu'a connue la Métropole, laquelle avait atteint en 1953 — année qui a précédé la réforme de cette fiscalité — le taux de 15,35%. Et, de même qu'en matière d'impôt sur les sociétés, des mesures de détaxation sélective peuvent être prises, en Algérie et au Sahara, sous forme de ristournes pour les entreprises agréées.

Par contre, l'on peut déplorer qu'en matière d'imposition de la production, l'Algérie et le Sahara n'aient pas adopté la nouvelle technique métropolitaine de l'imposition de la valeur ajoutée. En effet, celle-ci qui s'analyse comme une imposition de la plus-value nette dégagée au cours du processus de production comporte, par là même, une détaxation des investissements par rapport aux procédés antérieurs, qu'ils soient taxes „en cascade" ou taxe unique générale, à paiements fractionnés ou non. L'on ne peut que souhaiter l'adoption rapide de cette technique fiscale par toutes les régions de

l'Union française soucieuses de promouvoir leur développement général [7]).

Telles sont les particularités essentielles que présente la fiscalité algéro-saharienne par rapport à la fiscalité métropolitaine. Il est certain que, dans leur ensemble et sous la seule exception du maintien d'une technique fiscale attardée en matière d'imposition de la production, ces particularités, en allégeant le poids des charges fiscales, s'avèrent favorables à la réalisation d'investissement et, partant, susceptibles d'aider à promouvoir le développement économique de ces régions. Et il convient de souligner qu'avant même l'O.C.R.S. l'on s'orientait vers des mesures de détaxation sélective favorisant la spécificité de la fiscalité saharienne, puisque les avantages susceptibles d'être accordés par exception à la fiscalité algéro-saharienne de droit commun peuvent l'être par une autorité particulière pour le Sahara (le B.I.A.) et présentent des portées diverses.

Mais la fiscalité saharienne présente elle-même quelques particularités par rapport à la fiscalité algérienne.

L'une d'elles n'est qu'une survivance historique sans portée économique réelle: elle est constituée par l'existence des impôts Lezma et Zekkat.

Une autre particularité a son siège dans le régime des impôts directs. Pour les cédules, ainsi que pour l'impôt complémentaire global, ou bien la matière, ou bien les taux bénéficient, pour les Territoires du Sud, de réduction de 33 ou de 50% suivant la zone considérée. Il s'agit là d'une mesure générale et antérieure à l'actuelle politique de développement économique accéléré. Ayant été, pour la cédule sur les B.I.C., remplacées par les mesures de détaxation spécifique signalées plus haut, ces détaxations, bien qu'importantes, n'agissent pour ainsi dire pas, du fait des revenus auxquels elles s'appliquent, sur l'incitation à investir. Elles sont donc sans effet sur le départ du dévelloppement. Elles pourront en avoir sur le cours du développement par leur influence sur la répartition et l'utilisation des revenus qui en naîtront.

La troisième particularité digne d'être signalée que présente la fiscalité saharienne par rapport à la fiscalité algérienne est, elle,

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[7]) C'est dans ce sens que s'est orientée la fiscalité algérienne par le décret du 31 janvier 1958 qui prévoit le remboursement, aux entreprises agréées au plan d'industrialisation de l'Algérie, de la taxe à la production perçue sur les achats de biens d'equipement.

susceptible de contribuer efficacement au développement du Sahara et tout spécialement à son départ. Il s'agit d'un régime douanier libéral permettant l'accès au vide fiscal intérieur. A cet égard, un décret du 20 mai 1955 déroge au principe de l'Union douanière en exonérant des droits de douane à l'importation certains matériels d'équipement, en l'espèce ceux nécessaires aux entreprises participant à la mise en valeur de la zone saharienne de l'Algérie. Là encore est appliqué l'excellent principe de la détaxation sélective, puisque les listes limitatives sont établies tant pour les catégories de matériels que pour les entreprises bénéficiaires.

La raison de cette exception importante à un principe fermement maintenu pour l'Algérie, par exemple, réside dans l'ampleur des besoins du Sahara en biens capitaux d'importation. La nature des premières activités économiques sahariennes (prospection et exploitation minières) jointe à un manque absolu de production sur place fait que l'Union française — c'est-à-dire en fait la Métropole seule composante de cet ensemble possédant une véritable industrie lourde — est incapable de faire face à de tels besoins. La suppression de la barrière douanière s'opposant à l'entrée au Sahara des biens d'équipement que la France ne pouvait lui fournir — et la sélectivité de l'exemption fiscale permet de faire un choix tenant compte des besoins essentiels des entreprises sahariennes et des possibilités de la production française — constituait une condition sine qua non du départ du développement du Sahara.

Est-ce à dire que tout ait été fait pour rendre le Sahara compétitif sur le marché des demandeurs de capitaux? Certes non.

CONCLUSION

Il ne faut tout d'abord pas s'illusionner sur les possibilités d'action d'une politique fiscale en cette matière. La fiscalité, nous l'avons souligné, joue essentiellement en tant que l'un des éléments du coût de production. Son importance provient du fait qu'elle est l'élément de ce coût entièrement à la disposition des pouvoirs publics et que par son jeu ceux-ci peuvent parfois faire franchir au coût le seuil qui emporte la décision d'investir dans la région considérée. Mais les seules exonérations fiscales peuvent aussi s'avérer insuffisantes et les pouvoirs publics sont alors conduits à consentir des avantages positifs, tels les primes d'équipement et les bonifi-

cations d'intérêt prévues par le décret algérien du 31 janvier 1958, en sus des importants avantages fiscaux qu'il consent aux entreprises agréées. Mais tout ceci ne saurait avoir d'effet si manquaient certains autres éléments du cadre indispensable au développement, tels la constitution d'une infrastructure économique et sociale ou la stabilité monétaire.

Même ramené à l'estimation de sa juste valeur dans la promotion du développement économique et social, l'instrument fiscal ne mérite pas moins d'être perfectionné. Où en est à ce point de vue la fiscalité saharienne?

Il faut reconnaître que, d'une part, parce qu'elle a bénéficié des efforts déployés ces dernières années par l'Algérie pour orienter ses institutions dans un sens favorable au développement économique et social, d'autre part grâce à quelques mesures particulières, la fiscalité saharienne constitue moins profondément que ses antécédents pourraient le faire craindre un obstacle â la réalisation d'investissements.

Mais le risque d'une telle procédure est la complexité croissante du système fiscal saharien sans que l'on soit sûr de jamais parvenir à l'adapter parfaitement à la position économique et financière de cette région. Il convenait donc de fournir au Sahara les moyens de construire une fiscalité qui lui soit propre; ses conditions très particulières réclamaient une telle solution. Bien que l'Algérie soit, elle aussi, sous-développée, on ne peut, par exemple, bâtir la même fiscalité, surtout si elle est active, pour elle et pour le Sahara. L'une est riche en hommes mais pauvre en énergie et en matières premières et c'est tout le contraire pour l'autre. D'un point de vue économique, de telles complémentarités peuvent apparaître comme très heureuses quand elles se révèlent dans des régions voisines, mais d'un point de vue fiscal elles commandent des fiscalités, sinon divergentes, du moins séparées.

C'est à cette nécessité d'individualisation de la fiscalité saharienne que répond l'article 4 précité de la loi qui a créé l'O.C.R.S. Cet article ne fournit d'ailleurs qu'un cadre, non encore utilisé jusqu' à présent; la fiscalité saharienne du développement est encore à bâtir.

TAX SYSTEM AND DEVELOPMENT OF THE SAHARA

by Professor P. FONTANEAU

SUMMARY

Contrary to what might be supposed, the Algerian Sahara has a tax system which is going to impose a heavy burden on all its economic activities. But for some details, this tax system is the same as that of Algeria, which in turn was carefully modelled after the system of the mother country of before the reforms of 1948 and 1954. It is, therefore, not adapted to the particular financial position of the Sahara.

The Sahara is in fact a supplier of base materials, but it is in need of capital. In view of the present relative world-wide scarcity of capital, all the countries and regions that need capital are keenly competing, by offering fiscal or other facilities. They all follow, more or less and in different forms, the policy of the fiscal vacuum, which, to be effective, should satisfy certain conditions as to extent, importance and duration.

Therefore, if the Sahara wishes to promote its development it must join these countries and allow considerable tax reductions in its fiscal system, which, although not so exacting as that of the mother country — because, being no longer linked with it since 1948, it has neither kept pace with the constant increases in rates, nor, for that matter, benefited by the technical improvements, especially in the non-personal taxes — yet corresponds to a complex tax system, worthy of a developed country.

Even before the creation of the "O.C.R.S." (1957) tax abating measures were taken, which were particularly opportune, because they were selective, but insufficient. The fiscal powers of the "O.C.R.S.", though limited, justify the hope that the Sahara will get a tax system adapted to its development.

FOREIGN AID AND THE U.S. ECONOMY, 1948-55

by N. K. CHOUDHRY, S. SONENBLUM, H. E. STRINER [1])

I.

The European Recovery Program in 1948 marked the beginning of an unprecedented program of peacetime international philanthropy. The novelty of the plan lay not so much in its concept, as in the size of the program and the willingness with which the American people accepted what they felt to be their global reponsibilities.

From 1948-1955, the U.S. voluntarily gave either gifts or loans worth $ 42.8 billion in the form of cash or commodities. This represented about 1.5% of the nation's production, 9% of the national budget, and $ 43.42 per capita per year (See Appendix Table 1.)

What was expected in return for these expenditures? First, the expectation that the abundance of American production could contribute to the economic welfare of needy peoples throughout the world. The virtual bankruptcy of many nations compelled immediate aid in order to avert near starvation and to build up their productive machinery. This applied not only to the wartorn economies of Europe but to the underdeveloped economies of Asia, Africa and South America as well. Second, and increasingly important as time passed, there was the expectation that the aid program could become an inportant instrument of such foreign policy objectives as building up the U.S. military defense posture, containing the spread of communism, and winning or helping potential political allies. Third, there was the expectation that by aiding in the development and reconstruction of foreign countries, international trade could be put on a more solid footing and thereby, in the long run, the economic welfare of the U.S. increased. In this manner, economic aid was to help in providing the means of

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[1]) The authors are respectively at the University of Rochester, Rochester, New York; National Planning Association, Washington, D.C.; and Operations Research Office, Johns Hopkins University, Washington D.C.

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recovery so that a multilateral system of trade flows could become effective [2]).

Have these expectations been realized? It is not the purpose of this report to determine whether the first two objectives have been attained. Whether the costs of the foreign aid programs have been worth the return in the perspective of philanthropic and foreign policy objectives would involve extra-economic considerations and other information far beyond the limits of this paper.

It is the purpose of this report to examine more closely what the foreign aid programs have cost the U.S. since 1948 (which would be a first step, in any case, in determining whether the programs are worthwhile) and whether there have been any strictly economic benefits to the domestic economy which can be ascribed to the foreign aid program.

The diversity of opinion as regards the domestic economic effects of the foreign aid program can be attributed, in large part, to a confusion as to *what costs and what benefits* should be examined and, as a corollary of this, what assumptions about existing economic activities are most relevant.

An obvious distinction often overlooked is between the effects of the aid program upon the domestic economy as a whole and the effects on specific sectors of the economy. When viewing the economy as a whole, the productive effort involved in creating foreign aid commodities does not result directly in domestic consumption. Whether this is a net loss or net benefit to the economy, however, would depend on whether or not there were alternative outlets for productive effort available, and where these outlets occur. If there are alternative outlets for domestic resources then what the economy produces but does not consume can, by one definition, be considered a net cost- a cost which may be reflected in a possible inflationary effect on prices induced by the additional bidding in the market. If there are no alternative outlets, what the economy produces for foreign aid need not be considered a cost except in the case of irreplaceable resources which are used up in the producing process. Indeed, there is likely to be a net gain resulting from: a) the indirect income and output which is created by the foreign aid program and remains circulating within the domestic economy and,

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[2]) As has always been the case, multilateral trade bosed solely upon the comparative advantage of the trading countries has not developed to its fullest. To what extent trade barriers have negated foreign aid contributions would be most difficult to determine. Aside from this brief reference, this paper doet not seek to analyze the effects of trade restrictions on the effectiveness of the U.S. Aid programs.

b) the stabilizing effect on prices which the aid program may have in such a case.

Regardless of the prevailing economic conditions, the effect of the foreign aid program on a specific sector may be different from its effect on the economy as a whole. The foreign aid demands for a product increase output and employment, not only in the industry producing the product but also in the many industries directly and indirectly acting as suppliers to that industry (Appendix Table 5). If there were no foreign aid program and also no alternative activities, many industries would be adversely affected since they would be compelled to cut back production. But many other industries could benefit. For example, those industries which do not supply foreign aid commodities but whose costs are increased because of competition for factor inputs from the industries directly or indirectly supplying foreign aid commodities may experience a rise in the demand for their output as a consequence of a reduction in the Foreign Aid program. On the other hand, if there are alternative activities in the absence of foreign aid, there is no guarantee that each industry will participate in these alternatives to the same extent that they participate in foreign aid. Therefore, even with the likelihood that there will be alternatives to foreign aid, some industries could suffer as a result of a cut back or elimination of the foreign aid program.

What is the likelihood that there will be or would have been alternative activities in the absence of foreign aid, and what is the likelihood that if such activities were to occur their effects on specific sectors of the economy would be different from the over-all effects of the foreign aid program? First, alternative foreign trade activities are unlikely to replace foreign aid. In some ways, foreign aid has the same effect on foreign economies as does foreign trade. It permits these economies to obtain goods from the U.S. at a lower cost than if they were to look elsewhere for these goods. It is therefore to be expected that without aid, foreign countries would purchase from the U.S. through normal trade channels many of the goods which they now receive as aid. In the absence of such aid, however, the magnitude of U.S. exports (which include aid plus trade) would probably fall and certain goods and services would suffer heavily because of their inability to complete in the world market at world prices. Agricultural commodities and ocean shipping suggest themselves immediately as such possibilities. This, of course, would be at the expense of other goods which the aid recipients are now *able* to purchase because of dollars which they have available but do not have to spend on aid commodities. But things may not work out in this manner. Countries now receiving aid may

trade with third countries or produce domestically the goods they need but would not receive as aid from the U.S. However, it can be stated with some degree of certainty that the total value of trade would be less than the value of aid plus trade. We cannot look to foreign trade as an immediate alternative to the aid program. One further aspect of the aid program may be noted. The U.S. has some measure of control over the commodities which are shipped under the aid program so that it can act in favor of domestic sectors which require some support, thereby aiding sectors (agriculture and shipping e.g.) which it is fairly certain will not participate in normal trade to the same extent that they participate in aid. There is some truth to the witticism "aid not trade".

What has been said about aid and trade need not apply if a longer time perspective is allowed. In such a case, normal trade channels may well provide the alternative market outlets for which the U.S. is looking except in such cases as farm commodities and shipping. As recipient countries absorb the beneficial effects of foreign aid, they increase their productive abilities and thereby their exports. Some of these exports may purchase dollars which can be expended for imports from the U.S. This, as we have seen earlier, is one of the objectives of the foreign aid program. Has such an effect taken place? There is some evidence of a movement in this direction. Foreign trade, exclusive of its aid components, has increased substantially since 1948. The commodities which are important in the aid program have changed radically; immediate consumption commodities have decreased in importance, defense commodities have increased in importance, while non defense capital goods commodities have tended to decline slightly (Appendix Table 2). Conversely, trade commodities besides increasing in magnitude, have also changed in composition, adapting more closely to a pattern reflecting comparative costs of the U.S. and foreign countries.

If alternatives to the aid program are not to be found in foreign trade in the immediate future, are they likely to be found in the domestic area? The aid program is paid for by taxes and, in a few years since 1948, contributed to the deficit in the federal budget. A reduction of the tax bill by the amount of the aid program would have released a corresponding amount of domestic purchasing power. The major portion of this purchasing power, depending on the kinds of taxes affected, would then have been spent on consumer goods or domestic investment. In such a case, the composition of productive activities would have been different from that under the aid program, although the level of activity would probably have been substantially the same. Or perhaps there would not have been

a reduction of taxes as a consequence of the elimination of the aid program. In such a case, there might have been a reduction of the national debt or the size of the budget deficit which may or may not have led to a fall in the total of productive activity depending on whether or not the bank debt was reduced and its effects on bank lending policy. Another alternative is that the tax rates would have continued at substantially the same levels with the substitution of alternative government spending programs. About $^1/_3$ of the aid program has been spent on defense commodities [3]). Government purchases of such commodities would have continued, since the overall defense effort is independent of the aid program. Indeed, it is likely that defense expenditures might have increased, since it is usually accepted that foreign aid dollars spent on defense provide more "defense" than would an equivalent number of dollars spent at home. In addition, there are a number of government programs which might be instituted or increased if funds were available. The school program or the road program, e.g., could easily absorb the foreign aid funds and under easily envisioned political circumstances would receive such funds if the aid program were discontinued. The particular budget or tax policy the government might have adopted in the absence of a foreign aid program is difficult to assess since it depends on a multitude of political considerations.

Thus we conclude that an evaluation of the domestic effects of the aid program depends on: a) distinguishing between effects on the economy as a whole and on specific sectors of the economy; b) a rigid specification of what is meant by costs, benefits and net costs or benefits; c) identifying the political and economic environment in which the aid program occurs as to whether the aid program is an alternative to other domestic activities, or an addition to such activities.

In the National Planning Association study "Foreign Aid Programs and the U.S. Economy" [4]) an intensive analysis of the effects of the aid program on specific sectors in the economy was made (Appendix Table 5). It was there concluded that, in the absence of alternative expenditures of foreign aid funds, about 350,000 employees were engaged each year in directly producing foreign aid commodities. Another 240,000 employees were engaged in pro-

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[3]) Because of the administrative organization of the aid program it is very difficult to separate or even define defense and non-defense expenditures. The estimate given here relates to military hardware and related items excluding such items as defense support, etc.

[4]) *The Foreign Aid Programs and the United States Economy*, a study prepared by the National Planning Association at the request of the U.S. Senate, Report No. 9, Government Printing Office, 1957.

ducing the raw materials, services and processed goods acting as inputs to the foreign aid commodities. These employees were distributed among states in a pattern somewhat different from national employment although the large industrial states such as California, Illinois, Massachusetts, Michigan, New York, Ohio and Pennsylvania benefited the most in absolute terms (Appendix Table 6).

The distribution of industries shipping foreign aid commodities is different from the pattern of production in the U.S. Agriculture and food products, cotton, non electric machinery and transportation equipment are important foreign aid commodity producing industries (Appendix Table 3). The pattern of commodities being shipped under the aid program has changed from 1948 to 1955. A heavier emphasis has been placed on capital items and a lesser emphasis on consumer goods and semi durables.

Foreign aid shipments have never been a significant portion of the total production of any domestic industry with the possible exception of the shipping and cotton industries. Very few industries have shipped more than 5% of their output as foreign aid commodities during the period. When analysis was made on a product rather than industry level it was found that foreign aid could sometimes be very important. For example, in 1948, 23% of the production of bread grains was shipped as foreign aid.

Foreign aid shipments have been an important component of total export demand particularly in the early years (Appendix Table 4). In the high of 1949, 46% of exports were foreign aid commodities while in 1955 the ratio was 25%. The ratio of aid to exports for specific industries has changed sharply over the years with transportation equipment, electric machinery, cotton and fertilizers having the highest ratios in the most recent years.

Most of the industries which provided the bulk of foreign aid shipments since 1951 have been functioning at high employment levels. Therefore, foreign aid cannot be considered to have been an important employment prop. In part, in some instances where scarce skills were involved, as in machine tools or special electric equipment, a tight labor situation may have been somewhat aggravated by foreign aid demands.

II

The previous section describes the broad framework in which the effects of the foreign aid program on the economy as a whole may be viewed. In taking a closer look at these effects, however, it

becomes necessary to attempt a more precise definition of the meaning of domestic costs and benefits of the aid program.

In a simple economy in which there is no foreign trade or in which exports equal imports, the nation's production (O) is equal to the domestic consumption by the government, households, and business (E). If an aid program is introduced in such an economy, then the nation's production equals the domestic consumption plus the amount of the unilateral transfer (A), i.e., $O = E + A$. This condition would hold in all subsequent periods so long as it is assumed that the economy is closed or there is a balance between imports and exports. In such a case the measurement of the costs or benefits of the aid program depends on whether one is observing the movement of O, E or A as a consequence of the foreign aid policy.

A most common practice is to regard all foreign aid as a net cost to the U.S. economy equal to the value of goods and services transferred abroad under the aid program. Such a transfer cost definition is sometimes valuable as a first approximation when the problems under consideration involve the budget or strategic and scarce materials. In other instances, the practice is to define the costs or benefits of foreign aid as the difference between the transfer cost and some imputed value of extra economic gain which the foreign aid program is assumed to bring the U.S. While such estimates of benefit may be very valuable, it is doubtful that they are relevant to our purpose.

In this paper, discussions as to whether the foreign aid program costs or benifts the U.S. economy involve the question of what happens to the nation's production or expenditures as a consequence of the aid program. If as a consequence of the aid program the nation's real production increases by more than the amount of foreign aid, the nation is said to have gained; if it increases by less, then, the nation has lost. Thus the change in E in the equation $O = E + A$ measures the impact of foreign aid on the domestic economy. The net cost or benefit of foreign aid is defined by the change in O minus A.

The change in O is determined by three variables: first, the size of A; second, the multiplier effect (K) [5]) which any autonomous increase in expenditures has on the rest of the economy; third, by the coefficient (p) describing the proportion of A which would not be expended as a consequence of some alternative budget or tax policy in the absence of a foreign aid program. p can be viewed

5) As will be seen in Section IV, where we are concerned with the measurement of the effects of the aid program in stated years, K must be measured as a truncated one year multiplier and not an instantaneous multiplier.

as the probability in any period, that, in the absence of foreign aid, expenditures alternative to the aid program would *not* occur. This probability is then treated as the index or weight measuring the proportion of A which is not alternatively expended. Thus the change in O is measured by pKA and the net cost or benefit to the U.S. economy of the foreign aid program is pKA-A.

When p equals 1, i.e., there is certainty of no alternative programs to foreign aid, then the net cost or benefit equals KA-A. This is so because the entire aid program is regarded as contributing to product expansion in the U.S. When p is zero, i.e., the entire aid program would have been substituted for by domestic expenditures, the net cost equals A. This is so because since output would have increased by the same amount with or without the aid program, the cost to the nation is equal to the value of goods and services transferred [6]).

The net cost or gain to the U.S. economy of any given aid program is dependent on the product of pK. The condition for there being no cost or gain is pK = 1, there is a net loss if pK is less than 1, there is a net gain if pK is greater than 1. What are some of the cases likely to occur?

1) pK is zero if either p is zero or K is zero. p will be zero with alternative domestic expenditure programs while K will be zero if there is full employment before the introduction of foreign aid. Either of these circumstances is likely.

2) pK is less than zero only if K is negative. This is highly unlikely inasmuch at is implies a fall in O when A is introduced. Therefore, the possibility of a net cost greater than the value of the aid program can be ignored.

3) pK equals one, so that there is neither cost nor again. This case can happen only by coincidence, and hence can be ignored for practical purposes.

4) pK greater than one would imply a net gain. During the 1948-1955 period there was constant pressure for tax reductions, increasing social welfare programs and increasing government capital investment programs all of which tend to keep p low. p is large only when the bank debt is reduced and even in such a period a high p is likely to be accompanied by a low K. For these reasons it is not likely that foreign aid resulted in a net gain to the domestic economy in many of the years during 1948-1955. However, in a political and economic environment different from that of the

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[6]) In some cases it is proper to view the impact of the foreign aid program as the change in output without subtracting the transfer cost. For example, if the foreign aid program is viewed as a part of the U.S. defense program, then A need not be a transfer cost but can be considered a domestic expenditure.

1948-1955 period, foreign aid could be an important, positive beneficial factor.

5) When pK is between zero and one, foreign aid is a cost to the nation, but a cost which is less than the value of goods and services transferred. This is the most probable domestic impact of foreign aid in any period. In the next section we examine the magnitude of this impact for each year in the period, 1948-1955.

III

We are now prepared to quantify the net costs or benefits of the foreign aid program to the U.S. economy using the framework developed in Section II. It is, perhaps, necessary to emphasize that the estimates as derived are accurate only within wide ranges of error. It is felt, however, that they are sufficiently reliable as first approximations to probable orders of magnitude and as such may be used by legislators concerned with the domestic impact of foreign aid.

As indicated in the preceding section, an estimate of the net cost or benefit of the foreign aid program (pK-A) involves a) the measurement of K, the size of the one year truncated multiplier. (K is determined by the incremental ratio of "leakages" to income and the number of multiplier period in a calendar year); b) the measurement of p, the probability that the foreign aid program would not be substituted for by alternative domestic expenditures. (p depends on the political and economic circumstances influencing the Federal government budget and tax policies and on how the private sector would react to the government policy.) It was also pointed out that the availability of factor supplies sets an outer limit to real income expansion so that the foreign aid program has an effect on the price level as well as the constant dollar activity level in the U.S. [7]).

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[7]) The entire argument of section II can be stated in terms of the general price level rather than the activity level. As such the price level can be viewed as a barometer whose upward movement implies a net cost to the U.S. and whose downward movement indicates a net gain, as a consequences of the foreign aid program. Thus we assume that the value of foreign aid is a net addition to the demands for domestic production and that there are no demand output or demand price lags. The price level (P) is conceived as the ratio between the volume of demand (D) and the volume of output (O). Thus the magnitude and signs of the percent change in price depends on the percent change in demand and output. It follows that given the demand elasticity of output (eo) and the percent change in either demand or output, the demand elasticity of the price

a) The Measurement of K.

Following Machlup, who tries to equate the income generation (multiplier) period to the income circulation period of active cash balances, we first estimate the number of multiplier time periods in a calendar year. Machlup's multiplier period approximates the actual income generation period only under severly limiting assumptions [8]).

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level (ep) can be determined. The percent change in demand $\frac{dD}{D}$ is always known and equal to the value of foreign aid divided by the level of ouput less the value of foreign aid, because of the assumption that foreign aid is a net addition to demand. Thus if the demand elasticity of output is empirically derived the demand elasticity of the price level can be determined. The demand elasticity of output is the analogue to the multiplier described in section II.

If the elasticity of output is zero then the elasticity of the price level is equal to one. The net cost of the foreign aid program is equal to the value of foreign aid and is reflected in the price level by an increase proportionate to the ratio of foreign aid to total production. This describes situation one of section II.

If the elasticity of output is negative the net cost of the foreign aid program is greater than the value of the program. The price level increases by an amount greater in proportion than the ratio of aid to output. This describes situation two of section II.

If the elasticity of output is one the elasticity of the price level is zero and the price level remains unchanged. There is neither cost nor gain because of the foreign aid program. This describes situation three.

If the elasticity of out-put is greater than one the elasticity of price is negative and the price level goes down. There is a net gain because of the foreign aid program. This describes situation four.

If the elasticity of output is between zero and one the elasticity of price is also between zero and one. The price level goes up but by an amount less than that proportionate to the ratio of foreign aid to total production. The net cost is greater than zero but less than the value of foreign aid. This describes situation five.

[8]) For a detailed examination see Hugo Hegeland, "The Multiplier Theory", Lund, 1954, pp 123-153.

See Fritz Machlup's article "Period Analysis and the Multiplier Theory", Quarterly Journal of Economics, November 1939, reprinted in "Readings in Business Cycle Theory" (Philadelphia, The Blakiston Co., 1944), in which he argues that the multiplier time-period is likely to be equal to the period taken by active money to complete a full circle from income recipient to income recipient. This view seems to be in substantial agreement with that of R. M. Goodwin who states that "...the time from income creation to income creation implied in the velocity concept is the same as the overall lag inplied in the multiplier..." The New Economics, S. E. Harris, ed. (Knopf, 1947).

See the criticism of the above view by Gardner Ackley, "The Multiplier Time Period: Money Inventories, and Flexibility," American Economic Review, June, 1951, and Ralph Turvey, "Some Notes on Multiplier Theory", American Economic Review, June 1953. Ackley chiefly argues that since both inventories and cash balances are obtainable (can be dishoarded), the multiplier time-period is likely to be much more flexible than the period of income circulation of active money. He also argues that in case trade-credit is avaiable so that payments follow purchase, the flow of new money would depend on the rate

However, it does have the merit of being measureable and, if it is further assumed, following Hegeland, that current balances are used for capital transactions to only a limited extent, then the ratio of the nation's GNP to money supply (currency outside banks + demand deposits) would roughly correspond to the number of multiplier periods in a given year. The weighted mean of these ratios during 1948-1955 was estimated at 2.6 and represents the number of multiplier time periods.

We next measure the incremental ratio of "leakages" to income ($^{dL}/_{dY}$). It is assumed that the only relevant leakages are the marginal propensity to save and import. For the period 1948-1955 the weighted mean of these propensities was estimated at .21.

We finally estimate K on the basis of the formula

$$K = \frac{1 - \left(1 - \frac{dL}{dY}\right)^{2.6}}{dL/dY}$$

K therefore is equal to 2.2[8].

b) The Measurement of p.

Since the measurement of p involves conjectures about what may have happened as a consequence of an event which did not occur, estimating p even for past years is subject to a high degree of error. p is introduced in order to determine the proportion of foreign aid which can be taken as an autonomous event even after subtracting the effects of substitution possibilities. The magnitude of p therefore, depends on what the government would have decided to do with the funds "released" by an elimination of the aid program and on how much of these funds would have been used for current domestic production. If the government decides to spend these funds on alternative budget programs such as defense, roads, education etc. the value of p will equal zero since all the released funds are

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of flow of new goods and that there is no reason why the rate of increase of production should bear any relation to the speed of previous money flows. Thus the marginal income generation period may vary substantially from the average. The chief grounds for Turvey's criticism of Machlup's thesis are a) the period for which firms and households active balances may be only half of what is presupposed and b) increased dealings in the capital market on capital account will increase active balances (or their velocity) without affecting the income generation period.

[9]) K actually measures the effect of each foreign aid dollar from the time of its expenditure during the calendar year. For simplification however, we treat K as if all foreign aid expenditures are made at the beginning of the calendar year.

spent on current domestic production. If the government decides to take advantage of an eliminated aid program by reducing its debt or budget deficit by the amount of the aid program and this is not accompanied by an increase in private investment or expenditures through additional bank loans the value of p will be one. However, if bank loans are increased p will be less than one. If the government decides to reduce taxes by the amount of the aid program then disposable income will be increased by the same amount. However, since personal expenditures will not increase by the same amount because of import and savings leakages p will be less than one.

Since in any year the foreign aid released funds can be distributed among the alternatives in various combinations $p = \alpha B + \sigma D + \pi T$; B equals the proportion of the aid released funds which would have been spent by the government on alternative budget programs; D equals the proportion of the aid funds which would have been used to reduce the debt or budget deficit; T equals the proportion of aid funds which would have been "returned" to households in the form of a tax cut. The constants are incremental ratios referring to leakages induced by each of these expenditure methods. α refers to the proportion of budget expenditures made from the released aid funds which would not have been spent on domestic product. This is assumed equal to zero. σ refers to the proportion of the reduction in the debt or budget deficit which would not have been compensated for by additional bank loans or private expenditures. This is estimated equal to .50. π refers to the proportion of the incremental disposable income which is not expended on current domestic output. This is estimated as equal to the sum of the marginal propensities to save and import which equals .21.

We are now in a position to measure p and pKA-A for each of the years 1948-1955 [10]).

1948: This was an election year in which President Truman won on a platform advocating no tax cut and some reduction in the Federal budget. We assume that under these circumstances an elimination of the foreign aid program would have resulted in half of the value of the program being substituted for by other budget programs and the remaining half going to reduce the national debt. Thus: $B = .50$, $D = .50$, $\alpha = 0$, $\sigma = .50$. The value of foreign aid

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[10]) It may be noted that we do not wish to imply that the assumptions we make regarding the distribution, of aid released funds among B, D and T, in any given year, are the only ones possible. Given a different set of assumptions the estimate of net cost (benefit) would, of course, change.

amounted to $ 5305.9 million. Therefore, $p = (0)(.50) + (.50)(.50) = .25$. $pKA\text{-}A = (5305.9)(.25)(2.2) - 5305.9 = -2387.7$. The net cost of the aid program was $ 2.4 billion.

1949: Prices, particularly of agriculture products which broke in 1948 continued to fall in 1949. Production fell off going into 1949 accompanied by inventory liquidation and a reduction in business outlays of plant and equipment 1.3 billion below the 1948 level. We assume that the concern with a possible recession would have resulted in a substitution of other government programs if the aid program were eliminated. $B = 1$, $\alpha = 0$ to that $p = 0$. The aid program amounted to $ 6.019.6 million. Thus the net cost of the aid program was $ 6.0 billion.

1950: The first half of 1950 continued the decline of 1949. Recovery started in the second half of 1950 along with the Korean War. Thus if the aid program were eliminated it is assumed that anti-recession desires in the early part of the year and defense needs in the latter part would have resulted in a complete substitution of other government budget programs. $p = 0$. With an aid program of $ 4412.9 million, the net domestic cost of the program was $ 4.4 billion.

1951: The defense needs induced by Korea were sufficient to demand all the funds which would have been released by an elimination of the aid program. $p = 0$ and the aid program amounted to $ 4765.1 million. Thus the net domestic cost of the aid program was $ 4.8 billion.

1952: This was a year of high activity and worries about possible inflation and the size of the national debt and budget. There were few pressures for a tax cut or government capital investment programs. It is assumed that there would have been no tax cut or alternative budget program in the event of an elimination of the aid program. Thus $D = 1$ and $\sigma = .50$ so that $p = .50$. The aid program was $ 5462.3 million. Thus $pKA\text{-}A = (.50 \times 2.2 - 1)\ (5462.3) =$ $ 546 million. Therefore the net domestic gain from the aid program was $ .5 billion.

1953: Activity began to level off with no indication of a resumption of inflation, a backlog of social overhead programs, high national debt and a budget deficit. We assume that an elimination of the aid program would have resulted in half of the value of the program being substituted for by other budget programs and the remaining half going to reduce the budget deficit. Thus $D = .50$, $B = .50$, $\sigma = .50$, and $\alpha = 0$. Therefore, $p = .25$. The size of the aid program was $ 5873.6 million dollars so that $pKA\text{-}A =$ -$ 2643.4. The aid program cost the domestic economy $ 2.6 billion.

1954: A year of low activity accompanied by fears of recession.

It is assumed that elimination of the aid program would have resulted in complete substitution of other government programs so that $p = 0$. The value of the aid program was $ 5169.8 million. The net domestic cost of the aid program was $ 5.2 billion.

1955: Recovery from the 1954 recession had started. The objective of securing complete recovery would have induced a substitution of other government programs for the eliminated aid program. However, the increasing national debt and another deficit budget were major problems so that some of the released funds would have gone towards reducing the budget deficit. It was assumed that three fourths of the aid program would have been consumed by alternative budget programs and one fourth used to reduce the budget deficit. Thus $B = .75$, $D = .25$, $\alpha = 0$, $\sigma = .50$. Therefore $p = .125$. The aid program equalled $ 4411.5 million dollars so that $pKA\text{-}A =$ 3198.3 million. The net cost to the domestic economy of the foreign aid program was $ 3.2 billion.

c) The Availability of Factor Supplies

It has been assumed in the preceding calculations that the availability of factor supplies was never a general bottleneck in the process of product expansion during the period. It was felt that, in general, the labor market was not so tight and capacity so fully utilized as to prevent the real product expansion generated by foreign aid. However, during this period there were increases in the general price level and the measurement of K, to some extent, includes the effect of this rise, through its impact on the derived multiplier period. K is therefore overestimated and the net costs are underestimated. This is particularly significant for the year 1952 where a slightly smaller multiplier would shift the domestic effects from a net gain to a net cost.

Table 1

FOREIGN AND GRANTS AND CREDITS, GROSS RETURNS FROM FOREIGN COUNTRIES, AND VARIOUS AID INDEXES, 1946—56.

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	Jan–Mar 1956
1. Foreign aid gross grants and credits utilized billions of $	5.5	6.2	5.5	6.1	4.6	5.0	5.6	6.0	5.3	4.7	1.1
2. Gross returns by foreigns countries, millions of $	390.0	394.0	479.0	470.0	476.0	454.0	575.0	645.0	571.0	571.0	135.0
3. Foreign aid gross grants and credits utilized minus gross returns by foreign countries, billions of dollars	5.1	5.8	5.0	5.6	4.1	4.6	5.0	5.4	4.7	4.1	1.0
4. U.S. Govt. expend. billions $ . .	61.7	36.9	36.9	42.6	42.0	58.0	73.0	76.2	69.6	72.2	17.1
5. Gross grants & credits utilized as % of U.S. expenditures . . .	8.9	16.8	14.9	14.3	11.0	8.6	7.7	7.9	7.6	6.5	6.4
6. U.S. GNP billions of dollars . .	209.3	232.2	257.3	257.3	285.1	328.2	345.2	363.2	360.7	390.9	100.8
7. Gross grants & credits utilized as percent of GNP	2.6	2.7	2.1	2.4	1.6	1.5	1.6	1.7	1.5	1.2	1.1
8. U.S. natl income billions of $.	179.6	197.2	221.6	216.2	239.9	277.0	289.5	303.6	298.3	324.0	83.7
9. Gross grants & credits utilized as % of natl income	3.1	3.2	2.5	2.8	1.9	1.8	1.9	2.0	1.8	1.4	1.3
10. U.S. population millions	141.4	144.1	146.6	149.2	151.7	154.4	157.0	159.6	162.4	165.3	167.2
11. Gross grants & credits utlized on a U.S. per capita basis, $ . . .	38.89	43.03	37.51	40.88	30.32	32.38	35.67	37.59	32.64	28.43	26.31
12. Gross returns from foreign countries on a U.S. per capita basis, dollars	2.76	2.73	3.27	3.15	3.14	2.94	3.66	4.04	3.52	3.45	3.24

Source: The Foreign Aid Programs and the U.S. Economy, Report No. 9, Senate Special Committee to Study the Foreign Aid Program, U.S. Senate. Foreign Relations Committee, March 1957, U.S. Govt. Printing Office Washington, D.C., Appendix table 1.

transportation, utilities construction, government, etc. — constitute at least one third of total U.S. production. Estimates of the stake which some of these sectors have in foreign aid are given by their indirect effects shown in table 5.

Fertilizers (including mineral fertilizers)	23.1	31.9	37.2	15.2	16.1	8.7	14.9	33.4
Raw Cotton and Wool	251.5	606.4	582.6	450.0	229.7	208.1	262.5	101.9
Tobacco and Manufactures	122.8	202.1	181.6	114.2	62.1	38.3	63.0	68.5
Chemicals and Related Products	247.8	289.3	203.9	172.7	130.8	100.9	171.1	180.8
Lumber and Wood Products	36.0	44.7	29.3	27.8	22.5	13.1	19.3	30.5
Leather and Products	20.1	35.0	15.9	8.5	8.9	11.2	18.2	19.5
Paper and Products	40.1	42.7	25.3	35.1	33.2	20.4	39.5	47.5
Textiles	208.2	216.1	121.8	124.6	94.0	72.4	92.8	100.0
Petroleum and Related Products	236.0	243.3	155.9	140.7	153.5	92.1	125.4	123.5
Coal and Related Products	200.0	154.2	55.7	138.0	126.6	49.9	57.6	104.9
Iron and Steel	247.7	360.6	170.7	140.9	225.6	113.2	152.7	213.1
Non-Ferrous Metals Products	78.5	102.2	61.0	49.1	49.2	40.3	67.9	57.6
Metal Ores and Concentrates	4.6	7.2	7.1	4.9	7.2	8.0	7.0	6.7
Non-Metallic Minerals	67.6	83.9	56.4	42.8	43.7	31.3	41.6	48.4
Ordnance	37.7	32.4	204.1	497.4	1171.5	1450.1	778.0	410.9
Electrical Machinery	107.2	125.1	114.8	137.7	253.1	285.0	301.8	232.1
Non-Electrical Machinery	517.2	880.1	674.1	620.9	726.0	673.3	633.5	480.7
Transportation Equipment	409.5	465.0	313.9	466.5	791.9	1708.3	1254.2	1028.3
Miscellaneous Industrial Products	250.2	263.4	155.4	131.2	131.8	104.3	169.2	202.5
Ocean Freight	383.5	410.2	272.2	344.7	307.9	166.6	226.1	275.3
Services	143.3	138.0	242.9	300.0	385.0	354.8	29.3	283.1

Source: op. cit., Appendix table 6, pag. 65.

Derivation: This table was aggregated from the more detailed table found in the original study. The original table was derived by obtaining from the government agencies administering the aid program a listing of the purchases in each year. These were classified and aggregated into their appropriate industry sectors. This is not the total of aid, however. Cash credits, offshore, procurement and a minor amount of unidentified direct purchases from the U.S. are also included in the aid program. Since the value of this aid eventually returns as U.S. exports through the system of multilateral trade, it is necessary to distribute this component of the aid program among specific producing industries in some manner. It was assumed that the industrial composition of this aid was the same as the composition of exports in each year. Total exports by each industry in each year were derived; the goods and services indentified as being exported under the aid program for each year were subtracted from the industries' total exports. The proportion which each industry's non-aid exports was to total U.S. non-aid exports, in each year, was derived. The unallocated component of aid was then allocated among specific industries in accordance with these ratios. In addition, some miscellaneous

Table 3 U.S. AID RELATIVE TO U.S. PRODUCTION, 1948—1955 (by Industries).

	1948	1949	1950	1951	1952	1953	1954	1955
Total	.021	.024	.015	.014	.015	.016	.015	.011
Agriculture and Fishing	.032	.032	.017	.019	.011	.008	.007	.007
Food and Kindred	.022	.011	.006	.005	.003	.002	.009	.002
Oils (including chemical oils)	.023	.037	.023	.014	.009	.004	.015	.013
Fertilizers (including minerals)	.028	.044	.047	.017	.019	.008	.014	.030
Raw Cotton and Wool	.094	.222	.227	.146	.074	.063	.093	.038
Tobacco and Manufactures	.032	.053	.045	.027	.015	.009	.014	.015
Chemicals and Related Products	.030	.036	.021	.014	.011	.008	.013	.013
Lumber and Products	.006	.008	.004	.003	.003	.001	.002	.003
Leather and Products	.006	.010	.004	.002	.003	.003	.005	.005
Paper and Products	.006	.006	.003	.003	.003	.002	.003	.004
Textiles	.019	.020	.009	.009	.007	.005	.008	.008
Petroleum and Products	.017	.018	.010	.008	.008	.005	.007	.006
Coal and Products	.039	.038	.014	.023	.028	.010	.011	.018
Iron and Steel Products	.011	.017	.006	.004	.007	.003	.005	.006
Non-Ferrous Metals	.013	.017	.008	.006	.006	.004	.008	.006
Metallic Ores and Concentrates	.001	.002	.002	.001	.001	.002	.002	.001
Non-Metallic Minerals	.012	.015	.008	.005	.006	.004	.005	.005
Ordnance	.090	.078	.265	.549	.338	.252	.195	.094
Electrical Machinery	.017	.020	.014	.014	.022	.212	.025	.018
Non-Electrical Machinery	.037	.065	.043	.030	.032	.028	.030	.021
Transportation Equipment	.019	.022	.013	.017	.026	.043	.035	.026
Miscellaneous Industrial Products	.009	.010	.005	.004	.004	.003	.005	.005

Source: op. cit., Appendix table 10, page 75.

Derivation: This table was aggregated from the more detailed table found in the original study. The original table was derived by first obtaining estimates of the value of output in each year by each industry. These estimates are only approximate since the available information requires, for a number of industries, making arbitrary decisions regarding the methods of classification and aggregation, the relationship between shipments and output, and the relationship between value added and output. The aid shipments by each industry in each year were then divided by the corresponding industry output estimate to derive the ratio of aid to production. The ratios for the total of all commodities were derived by excluding both services and transportations from total aid and total production. They therefore represent the percent which aid is of agriculture, mining and manufacturing all one. The producing sectors excluded — services, transportation, utilities construction, government, etc. — constitute at least one third of total U.S. production. Estimates of the stake which some of these sectors have in foreign aid are given by their indirect effects shown in table 5.

Table 4

U.S. AID RELATIVE TO U.S. EXPORTS, 1948—1955, BY INDUSTRIES.

	1948	1949	1950	1951	1952	1953	1954	1955
Total	.383	.460	.384	.277	.317	.343	.311	.250
Agriculture and Fishing	.655	.551	.527	.373	.223	.191	.196	.158
Food and Kindred	.583	.469	.368	.263	.191	.136	.637	.167
Oils (including chemical oils)	.566	.543	.433	.162	.190	.171	.206	.196
Fertilizers (including minerals)	.297	.379	.484	.300	.417	.207	.241	.366
Raw Cotton and Wool	.492	.685	.586	.392	.263	.397	.332	.211
Tobacco and Manufactures	.428	.655	.610	.299	.204	.095	.172	.164
Chemicals and Related	.352	.417	.287	.181	.171	.129	.178	.178
Lumber and Wool Products	.328	.436	.355	.187	.180	.125	.166	.206
Leather and Products	.287	.452	.314	.159	.148	.132	.183	.183
Paper and Products	.289	.381	.236	.152	.171	.133	.173	.163
Textiles	.293	.388	.283	.180	.172	.143	.183	.185
Petroleum and Products	.359	.433	.312	.180	.192	.133	.191	.192
Coal and Products	.406	.501	.200	.228	.248	.144	.185	.212
Iron and Steel Products	.284	.392	.273	.173	.233	.135	.179	.177
Non-Ferrous Metals	.331	.546	.405	.256	.230	.234	.220	.188
Metallic Ores and Concentrates	.305	.456	.433	.154	.180	.220	.169	.141
Non-Metallic Minerals	.309	.395	.300	.171	.186	.133	.170	.170
Ordnance	.633	.473	.733	.803	.892	.670	.604	.213
Electrical Machinery	.275	.350	.336	.273	.440	.379	.413	.314
Non-Electrical Machinery	.278	.438	.401	.289	.310	.303	.293	.206
Transportation Equipment	.287	.404	.298	.256	.405	.649	.525	.431
Miscellaneous Industrial Products	.265	.321	.224	.150	.158	.104	.177	.178

Source: op cit., Appendix, table 8, page 20.

Derivation: Aggregated from the more detailed table found in the original study. The original table derived by estimating the value of exports by each industry from the *Quarterly summary of Foreign Commerce of the United States*. The aid shipments by each industry were then divided by the corresponding exports estimates to derive the ratio of aid to exports. The ratios for the total of all commodities were derived by excluding both services and transportation from total aid and total exports.

Table 5

DIRECT AND INDIRECT EMPLOYMENT CREATED BY THE 1955 FOREIGN AND PROGRAM

(Hundreds of Employees)

	Direct	Indirect	Total
Total	3579	2403	5982
Agriculture	988	19	1007
Food and Kindred	75	21	96
Oils (including Chemical Oils)	5	5	10
Fertilizers (including minerals)	13	1	14
Raw Cotton and Wool	1)	1)	1)
Raw Tobacco 1) and Manufactures	3	2	5
Chemicals and Related Products	89	72	161
Lumber and Products	27	81	108
Leather and Products	19	4	23
Paper and Products	22	69	91
Textiles	86	47	133
Petroleum and Related Products	31	25	56
Coal and Related Products	52	63	115
Iron and Steel	138	526	664
Non-Ferrous Metals	18	148	166
Metallic Ores and Concentrates	1	46	47
Non-Metallic Minerals	33	46	79
Ordnance	131		131
Electrical Machinery	183	128	311
Non-Electrical Machinery	461	259	720
Transportation Equipment	823	123	946
Miscellaneous Industrial Products	158	189	347
Electric Light and Gas		1	1
Transportation	183	157	340
Trade		129	129
Services	40	132	172
Unallocated		110	110

1) included in Agriculture.

Source: op, cit., Appendix Table 13, page 85.

Derivation: This table was aggregated from the more detailed table found in the original study. The original table was derived as follows. Estimates of the total employment by each industry in 1955 were obtained. These estimates were then multiplied by the corresponding industry ratios of aid to production (see table 3) to obtain the direct employment created by the aid program. This is equivalent to multiplying aid shipments by the industry productivity ratio under the assumption that commodities shipped as aid have the same productivity ratio as the industry's commodities consumed domestically. This procedure was followed for all industries except transportation and services. Direct transportation employment was derived by multiplying the ratio of employment to output in the ocean freight industry by the foreign aid funds paid to the ocean freight industry. Direct employment in the service sector relates to the employment of technicians, scientists, etc., which could be obtained directly from information in the ICA Operations Reports.

It is possible to obtain the indirect employment created by each aid shipment with use of an interindustry relations table. Walter S. Salant of the Brooklings Institute has gone through the arduous task of determining the direct and indirect

employment created in each industry in the economy by $ 1 million worth of exports by each of 72 selected industries. Mr. Salant was kind enough to provide us with these tabulations. There are admittedly a number of approximations in the calculations arising from certain properties of the interindustry table available to Mr. Salant. The most important of these from our standpoint is that the basic interindustry data relate to 1947 since which time there may have been important structural changes in the economy and that the data do not permit including the indirect effects transmitted through the so-called final demand sectors — households, government, capital formation, etc.

It will be noted that the Salant data, stated in terms of employment per million dollars of exports can be translated to indirect employment in each industry per every hundred people directly employed in each exporting industry simply by dividing each industry's indirect employment by the employment creating industry's direct employment and multiplying by 100. When these ratios are multiplied by the direct employment necessary to produce the aid commodities and divided by 100, we obtain the indirect employment created in every other industry by each of the industries directly shipping aid commodities. In order to arrive at the total of each industry's indirect employment created by the 1955 aid program, we sum all of the indirect employments created in that industry by each of the industries shipping aid commodities. These results are shown in column 2 of table 5.

There are several limitations in the indirect employment estimates which should be mentioned. Since the Salant data dealt with only 72 exporting industries, there were several industries shipping aid commodities whose indirect employment generating effects on other industries could not be determined. Second, the Salant data did not include the indirect effects upon agricultural commodities coming under the government purchase program. Thus, the agriculture line in table 5 shows the indirect employment effects on the meat animals and products, poultry and eggs, and farm dairy products industries while the direct employment relates to all agriculture industries. Third, in computing the indirect effects, we ignored those instances in which a given industry's effects on a specific other industry were small. However, when these "small" effects are summed up for each industry, they might come to a perceptible amount. These "ignored" effects although not included in each industry estimate are summed and included in the unallocated indirect employment estimate.

Table 6

STATE EMPLOYMENT CREATED BY 1955 AID PROGRAM

Alabama	2872	Nebraska	35
Arizona	517	Nevada	0
Arkansas	324	New Hampshire	248
California	34882	New Jersey	17307
Colorado	235	New Mexico	0
Connecticut	9971	New York	38249
Delaware	0	North Carolina	3959
Florida	813	North Dakota	0
Georgia	1919	Ohio	39767
Idaho	188	Oklahoma	1674
Illinois	30694	Oregon	972
Indiana	15265	Pennsylvania	34010
Iowa	2051	Rhode Island	2235
Kansas	4599	South Carolina	324
Kentucky	1664	South Dakota	0
Louisiana	1045	Tennessee	1919
Maine	388	Texas	12082
Maryland	4344	Utah	329
Massachusetts	10726	Vermont	0
Michigan	30302	Virginia	3065
Minnesota	2320	Washington	4123
Mississippi	3045	West Virginia	3737
Missouri	1764	Wisconsin	9111
Montana	376	Wyoming	0

Source: op, cit., Appendix table 15, page 91.

Derivation: Aggregated from the more detailed table found in the original study. The original table was derived as follows. For each industry, the percent of total U.S. employment accounted for by each state in 1953 was derived. The proportions for only the relatively more important states within each industry were derived. In most cases, this included more than 60 % of total U.S. employment. Next, the total employment (direct and indirect) created in each industry by the foreign aid program was multiplied by the various state percentages. Finally, the employment created by all industries, for each state, was summed to give the state employment generated by the aid program.

These state employment estimates are too low for several reasons. First, since for each industry not all state proportions were included, the total of all aid created employment was not distributed among specific states. Second, the indirect employment underestimates inherent in table 5 are also inherent in table 6. In spite of the underestimates, however, table 6 can serve as an indication of the relative geographical distribution of the foreign aid shipments.

L'AIDE A L'ETRANGER ET L'ECONOMIE DES U.S.A. 1948-1955

par N. K. CHOUDHRY, S. SONENBLUM, H. E. STRINER

RÉSUMÉ

Le début de l'application du Plan de redressement de l'Europe en 1948 marqua la naissance du plus vaste plan d'assistance internationale que l'histoire ait jamais connu en temps de paix. Comme il est normal, un vif intérêt a été suscité par les effets économiques de ce plan d'assistance, principalement sur les économies bénéficiaires. En opposition, le présent article met en lumière les effets du Plan d'aide à l'étranger sur l'économie du donateur. En particulier, il pose la question: Quels ont été pour l'économie des U.S.A. les coûts et les bénéfices du Plan d'assistance? Il est clair que le sujet ainsi dégagé se réduit à définir les coûts et les profits et à faire les hypothèses les plus plausibles sur leurs répercussions actuelles.

Une méthode courante consiste à considérer toute aide à l'étranger comme un coût net pour l'économie des U.S.A. égal à la valeur des biens et services transférés à l'étranger suivant le Plan d'assistance. Dans le présent article, la discussion (et l'évaluation) de cette statistique exige de connaître comment est affecté le produit national par le Plan d'assistance. Si la conséquence en est que le produit réel de la nation augmente de plus que le montant de l'aide fournie, on peut dire que la nation est gagnante; s'il augmente de moins que l'aide fournie, la nation est perdante.

Trois variables déterminent la variation du produit national. D'abord, le volume du plan d'assistance en une année quelconque (A) qui constitue le multiplicande de notre équation. Ensuite la valeur du multiplicateur tronqué d'une année

$$K = \frac{1 - \left(\frac{dL}{dY}\right)^n}{\frac{dL}{dY}}$$ quand $\frac{dL}{dY}$ est le rapport d'accroissement des fuites au revenu et n le nombre des périodes du multiplicateur en

un an). Troisièmement la probabilité (p) que des alternatives de dépense intérieure pour le Plan d'aide ne se produiraient pas. La valeur de p est alors prise comme coefficient indiquant la fraction des dépenses d'assistance à laquelle ne se substitueraient pas d'autres programmes de dépenses, gouvernementaux ou privés. La formule donne:

Coût net (Bénéfice) $=$ pKA $-$ A $=$ (pK $-$ 1)A. Qu'il y ait un coût net, un bénéfice net ou bien ni coût ni bénéfice dépend de ce que $pK < 1$, $pK > 1$ ou $pK = 1$.

Déterminons maintenant les grandeurs suivantes:

1) A $=$ montant du Plan d'assistance. A est donné chaque année (Cf. appendice).

2) $K = \dfrac{1 - \left(\dfrac{dL}{dY}\right)^n}{\dfrac{dL}{dY}}$ Nous évaluons $\dfrac{dL}{dY} = \dfrac{dS + dM}{dY} = .21$

(S représente l'épargne et M les importations) et n approché par la vitesse de revenue de la monnaie (rapport de GN à l'offre de monnaie) à 2.6. K égale ainsi 2.2.

3) $p = \alpha B + \sigma D + \pi T$. p comprend ainsi 3 variables

B $=$ la proportion de fonds d'aide libérés, au cas où le Plan d'aide serait clos une certaine année, que le gouvernement aurait employés à des programmes budgétaires alternatifs.

D $=$ la proportion de fonds d'aide libérés employés par le gouvernement à réduire le déficit du budget courant ou le dette publique.

T $=$ la proportion de fonds d'aide libérés destinés aux contribuables sous forme de réduction d'impôts.

Il est clair que B + D + T $=$ 1 si l'on suppose que les fonds d'aide libérés sont employés pour B ou D ou T. Les paramètres compris dans le calcul de p' sont:

α $=$ proportion de dépenses budgétaires financées par les fonds d'aide libérés (b) non utilisée pour biens domestiques, supposée égale à O.

σ $=$ proportion de la réduction du déficit budgétaire ou de la dette publique (B) non compensée par des emprunts bancaires supplémentaires ou des dépenses autonomes, supposée égale à .50.

π = proportion d'accroissement du revenu disponible dû à la réduction d'impôts (I) non dépensée en réduction domestique, supposée = à $\frac{dL}{dY}$ = .21.

p' égale donc oB + .50D + .21 T. Ainsi chaque année le coût net (bénéfice) égale [(OB + .50D + .21T) (2.2) — 1] A. Si nous estimons la proportion de fonds d'aide libérés telle que B + D + T = 1, nous sommes en mesure d'évaluer les coûts nets (bénéfices) de l'aide étrangère pour l'économie des U.S.A. en 1948-1955.

Voici les résultats:

1948 - B = .50	D = .50	T = 0	A = 5305.9 million	pKA-A = — $ 2387.7	millio
1949 - B = 1	D = 0	T = 0	A = 6019.6 „	pKA-A = — $ 6019.6	„
1950 - B = 1	D = 0	T = 0	A = 4412.9 „	pKA-A = — $ 4412.9	„
1951 - B = 1	D = 0	T = 0	A = 4765.1 „	pKA-A = — $ 4765.1	„
1952 - B = 0	D = 1	T = 0	A = 5462.3 „	pKA-A = + $ 546.0	„
1953 - B = .50	D = .50	T = 0	A = 5873.6 „	pKA-A = — $ 2643.4	„
1954 - B = 1	D = 0	T = 0	A = 5169.8 „	pKA-A = — $ 5169.8	„
1955 - B = .75	D = .25	T = 0	A = 4411.5 „	pKA-A = — $ 3198.3	„

BACKNUMBERS WANTED

★

The following numbers are wanted:

Year 1946 Nrs. 1, 2, 4

Year 1947 Nrs. 1 et 2

Year 1950 Nr. 1

Offers with indication of price are to be made to:

Professor V. Rouquet La Garrigue, 8, rue Lallier,

PARIS, IXe., France

THE "TAXATION" EFFECTS OF ALTERNATIVE TECHNIQUES FOR TRADE PROTECTION

by ROBERT SOLO
The City College of New York

The measures taken to "protect" trade have as their primary purpose the control over the flow of commodities between nations, and the concern of international trade theory has been with the effect of the deliberate interference with such trade flows on the welfare of groups and on the international allocation of resources. However, aside from their effect on the international flow of goods and resources, the imposition of measures for trade-protection will also affect the distribution of income within the community.

This paper will deal with the internal effects of the choice between alternative measures for trade protection, i.e., with the effects of the choice of *alternative techniques* for achieving a given level of trade protection on government revenue and on the distribution of income, and, consequently, on the levels of employment and on the allocation of resources within the particular community. This is a matter of importance for those countries where a large proportion of national output enters into international exchange, where imposts on international trade-flows provide a major portion of Government revenue, and where a complex system of trade protection must be relied on to reshape the structure of the internal economy.

Throughout this discussion it will be assumed that imports are limited to the extent necessary to maintain a specified level of output and consumption for the product of a particular domestic industry. This fixed level of protection and the converse requisite exclusion of imported commodities will, of course, have an effect on the world prices of the imported commodities, on the foreign demand for domestic commodities, on the price ratios of goods in international exchange, and on level of employment and income. Effects attributable to a *level* of domestic protection of or import exclusion (which is the traditional focus of concern in the theories of international trade) will not be considered here. A level of trade protection (as defined above) and all of the consequent effects of the exclusion of imports are the parameters of our problem here. Taking this level of trade protection as given, there yet remains a variety of techniques, e.g., tariffs, import-quotas, producer's subsidies, etc., whereby such a level of protection can be attained. The

concern here will be with the various effects on price relationships, income distribution and resource allocation of these techniques *qua* techniques, given the same level of trade protection. This is analogous to studying alternative types of taxation, as aside from considering the effects of a level of government revenues and expenditures which these tax measures might be used to support.

I. THE BASIC FORMS OF PROTECTION

For simplicity of exposition, let it be supposed that a government intends to guarantee output and consumption of domestic product D. In order to do this it is necessary to exclude some portion of foreign import F, which is a substitute for D on the home market.

For the purpose of analysing their taxation-effects, all of the many varied forms of trade protection can be sorted into three basic types. First there are those techniques which limit the consumption of F, and thus protect the alloted output of D, by raising the price at which F sells on the domestic market. Techniques of this category include tariffs, import-quotas, and excise taxes on end-products embodying F. The techniques just mentioned ordinarily act to create a differential between the domestic and the world price of F. Protection may, however, involve an increase in both the world and the domestic price of F. Thus, for example, strategic stockpiling in the United States appears to have had the protection of domestic industries at least as a subsidiary objective so that purchases by a powerful Government buyer have sometimes been geared to drive up the world (and the domestic) price of F, thus to protect the position of the producers of D. Similarly the protection of domestic producers through control over world prices of F is implicit in many of the contemplated international commodity agreements.

Second there are those techniques which limit the domestic consumption of F, and thus protect the output-position of the producers of D, by lowering the price of D sufficiently below the import price of F. All of the techniques of this category involve the payment of some sort of subsidy — to primary or to secondary producers, to distributors or to final consumers [1]).

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[1]) Subsidy admits of many variations. It may be paid as guarantee to the seller against loss at a price policy required to maintain the desired level of consumption. Or subsidies might be paid to support or induce steps considered likely to strengthen the ultimate competitive position of producers of D, without being directly related to immediate sale price, e.g., long range research might be supported or efficiency bonuses offered in order to encourage the attainment of higher levels of efficiency. Ultimate reliance would be in the induced reduction

It will be noted that the techniques of the first two categories operate through creating a differential between the price of D and the price of F, and allow D and F to be allocated between alternative end uses through the mechanism of the free market at the new price ratios.

Rather than relying on this price differential, the required output and consumption level of D could be maintained by acting directly on the factor combinations employed by particular fabricators or on the consumption patterns of particular consumers. Thus the third category of measures for trade protection are those which impose a particular pattern of consumption of F and/or of D on fabricators or on end-product consumers. The techniques of this category may operate through administrative order and the coercion of law or through the inducements of subsidy.

Specific trade-protection practice may combine two or all three of these basic types. Thus, for example, a government monopoly on the purchase and resale of F and D, might both restrict the consumption of F by raising the domestic-resale above the world price of F and might seek to increase the consumption of D by lowering the domestic-resale price of D below the cost of procuring D. Further, such a monopoly might use the revenue created through the appropriation of the differential between the world price and the domestic-resale price of F to subsidize a lower market price for D or to subsidize specific changes in the technology of fabrication or in the particular patterns of consumption so as to expand the use of D, or, in its monopoly position, the government could require a specified pattern of use in fabrication or in consumption as a condition of sale of D or F or both.

Another example of how these basic techniques of import control are combined in specific practice would be the so-called "import-certificates" or "import-licensing" plan which has been used in European markets. Here purchasers of D would receive negotiable certificates entitling the procurement and importation of F in some fixd ratio to the amount of D purchased. With the importation of F thus limited, the domestic sales value of F would be raised above the world price of F and the consumption of F would thereby be restricted. Inasmuch as a differential was created between the domestic value and the world price of F, the import-certificates would have a monetary resale value and would, in effect, comprise

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of the domestic price level of D relative to F. Or subsidies might be paid to encourage the consumption of D by bonus payments to all or to some of its consumers for all or for some of is uses. In the latter case the need for subsidy would be minimized if such subsidy was limited to be marginal user of F.

a premium attached to each unit purchase of D, hence lowering the purchase price of D (sales price minus the value of the import certificate) and correspondingly would raise the level of consumption of D.

In sum then, all particular techniques of trade protection operate through raising the price of F, and/or through lowering the price of D, and/or through requiring specific changes in manufacturing practice or in end product consumption. The taxation aspect of all particular measures for trade protection can be understood by reference to these three modes of operation.

II. THE PRICE EFFECT

In an important general sense the impact and consequence of the first two basic forms of trade protection described above, i.e., those that raise the domestic price of F and those which lower the domestic price of D, are analogous to the impact and consequence of the imposition of partial excise taxes. For economic analysis the essential consequence of an excise tax is that of a deliberate administrative alteration of the equilibrating price relationships of the market through the exercise of a force exogenous to the market. With regard to this arbitrary alteration of particular price relationships, economic analysis has sought to determine the effects on the movement of other prices, on the welfare of particular consumers and on the general welfare, on resource allocation, on capital accumulation, on employment and on income distribution. The extensive and complex literature of excise tax theory encompasses the highly equivocal solutions hitherto offered by economics to these problems [2]). Without attempting to summarize or to evaluate the existing theory of excise taxes, it suffices for the purpose of this paper to show that certain defined categories of techniques for trade protection operate by a deliberate administrative alteration of the equilibrating price relationships of the market through the exercise of a force exogenous to the market, and hence that the phenomenon which is focus of excise tax analysis is also

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[2]) While it would not appear warranted to cite the whole of the relevant literature here, by way of illustration a few of the recent contributions include I.M.D. Little "Direct vs Indirect Taxes" *Economic Journal* September 1951, J. F. Due "Towards a General Theory of Sales Tax Incidence" *Quarterly Journal of Economics* May 1953, R. A. Musgrave "On Incidence" *Journal of Political Economy* August 1953. Milton Friedman "The 'Welfare' Effects of Income Tax and an Excise Tax" *Journal of Political Economy* February 1952, George F. Break "Excise Tax Burdens and Benefits". *American Economic Review* September 1954.

a phenomenon characteristic of particular techniques of import control and trade protection. Inasmuch as this is the case, the questions raised and the solutions offered by excise tax theory apply with equal force in the analysis of these measure for the protection of trade. Indeed one may consider the price-effects of measures for trade protection as a special case of the price-effects of partial excise taxation, particular only inasmuch as certain economic groups are regularly identifiable as parties-at-interest to action in this area.

In the imposition of measures for trade protection, the parties-at-interest to the primary price-effect are the foreign sellers and domestic importers of F, the foreign and domestic producers of products competitive with F and D, and of products complimentary to F and D, the producers for whom D and F are factors of production, and the consumers of end-products embodying D or F. Protective measures of the first category which raise the domestic price of F would be relatively advantageous to the producers of products competitive with D and F, whereas the use of these techniques would be to the disadvantage of all other parties-at-interest. Conversely with the use of techniques of the second category where the price-effect is to lower the price of D. Here all groups would be advantaged save the producers of competitive products. Briefly the incidence may be described. Techniques which operated by raising the price of F, would tend to result in a higher price for end-products embodying D and F, to the disadvantage of consumers and to the advantage of producers of products competitive with these end-products, and to the disadvantage of producers of products complimentary with these end-products. Higher relative prices for D and F, considered as factors, would presumably lead either to reduced profit margins at constant end-product prices, or to reduced sales volume at the same per unit mark-up, in either case to the disadvantage of the fabricators. With relatively higher prices a consequent reduced consumption of D and F together, would require a larger exclusion of F to maintain the given level of output

The third basic form of import control and trade protection is less amenable to the characteristic analysis of excise tax theory. Implicit here is a change in factor-combination and hence in the organization of production and/or in the pattern of consumption, a change which is brought about directly rather than through an alteration of the and consumption of D, and hence the price-effect of techniques of this first category would be to the disadvantage of foreign producers and importers of F. With techniques of the second category, lowering the price of D, in each instance the incidence of the price-effect would be precisely the converse as those described immediately above.

price relationship. However, although it does not operate *through* an alteration of price relationships, the imposition of this form of control may be presumed to have certain regular effects on existing price relationships and hence to be partly subsumable under the theory of partial excise taxation.

If it were to be assumed that the play of entrepreneurial and consumer choice on the free market leads to the most efficient organization of production and to the welfare-optimizing pattern of consumption, then it might be supposed that the maintenance of a given level of protection through the imposition of techniques of the third category, as compared to the use of the techniques of the first two categories, would cause a further deviation of the organization of production and/or of the pattern of consumption from the welfare-maximizing optimum. Because they would lead presumably to a less efficient organization of production, where D and F were factors of production, the use of the techniques of the third category would result in higher production costs and, presumably, in higher end-product prices. Since this price increase would have proceeded from induced inefficiency or waste, it would *not* imply (as would have been the case where the price increase was due to the imposition of an excise tax) an outflow of resources from the production of end-products embodying D and F into other areas of production and consumption. Higher prices and reduced consumption of end-products embodying D and F would not be offset by reduced prices and increased consumption elsewhere when the increase in end-product price was due to induced inefficiency. Similarly a directed change in the pattern of end-product consumption need imply no shifts in expenditures inducing shifts in resources perhaps resulting in offsetting changes in factor and production costs and in prices elsewhere.

It need not be assumed, of course, that a State-directed change in the organization of production or of the pattern of consumption will necessarily lead to reduced efficiency or to a lower level of consumer satisfaction. In practice indeed, it would appear that forced changes in the pattern of resource distribution have sometimes led to higher levels of efficiency and to ultimately preferred patterns of consumption — as is indicated by the frequent irreversibility of changes imposed on the organization of production or on the pattern of consumption during a war economy. Moreover the use of the techniques of the third category have the important advantage of facilitating a reshaping of the organization of production and the patterns of habitual consumption according to policy criteria other than that of maximizing consumer welfare, e.g. strategic readiness. Finally the use of the techniques of the third category may be

relatively advantageous to the various parties-at-interest inasmuch as the use of subsidies or coercion to induce specific changes in the patterns of use or consumption can induce higher or lower prices for D or F or for the end-products into which they are embodied as factors than would have been the case with alternative techniquos of trade protection. Price-effects, in the instance of this or of the other categories of measures for trade protection are not the only concern of the particular parties-at-interest, as will be indicated in the two sections below.

II. THE INCOME EFFECT

The imposition of excise taxes have an effect on income distribution which is separable from the income-effect implicit in changed price relationships. The ostensible purpose of levying the excise tax is to divert resources from private into public ends, i.e. to provide government revenue. While it is not usually the case that this revenue objective is the primary purpose of the imposition of measures for trade protection, it is nevertheless true that these measures generally do have a revenue-effect and other income-effects which are closely analogous to those of excise taxes. Moreover the imposition of measures for trade protection will affect the level of national income, output and employment in a manner analogous to that of the imposition of excise taxes. The relationship between the income-effects of excise taxation and trade protection can perhaps most easily be established by considering not the effects on „real" income but, in the first instance, by indicating the effects of the imposition of such measures on the *ex post* data of national income.

The imposition of an excise tax will create a discrepancy between Gross National Product and National Income, with the former being thereby made higher than the latter to the extent of the excise tax. When measures for trade protection of the first category are imposed, i.e., those wich operate by raising the domestic price of F, there may be precisely the same effect on national income data as would the case with the imposition of a domestic excise tax. The value of Gross National Product will be increased above the value of National Income to the extent that the domestic price of F has been raised above its world price *so long as* the government appropriates the whole difference between the world and the domestic price of F. With certain of these first category techniques of trade protection however the government does not appropriate the whole of this differential. For example where the inflow of F is limited by the use of import quotas, and where the privilege of

importing under these quotas is restricted to the holders of import-licenses, then the differential between the world price and the domestic (actual or imputable) price of F would be appropriated by the privileged importer except inasmuch as the government pre-empted a share (or the whole) of this margin through a charge exacted for the privilege of importing. Inasmuch as a differential is created between the domestic and the world price of F, and this differential is appropriated domestically by the importer or by some other private party (rather than by the government) the rise in the value of Gross National Product will be matched by a rise in the value of National Income and no discrepancy will be created between the two. Where techniques of this first category operate through the raising of the world as well as the domestic price of F, then the rise induced in value of the consumption goods or of the capital goods item of the Gross National Product data will be offset by a decline in the value of net exports, with no discrepancy created between National Income and Gross National Product.

The possible „real" *ex ante* effects of the imposition of the techniques this first category of protective measure on prices, average revenues, gross expenditure, output, and employment are quite comparable to range of possible effects of imposition of excise taxes. Where expenditures, prices and output are held constant, then average revenues must drop. Where output and average revenues are held constant, then the price level must rise. Where expenditures, prices and average revenues are held constant, then output and employment must decline.

Turning to the protective measures of the second category, which rely on reducing through subsidy the domestic price of D sufficiently below the world and domestic price of F, it would appear that the use of the techniques of this category have precisely the reverse effect on the *ex post* data of national income as have the imposition of excise taxes as indicated immediately above.

The value of Gross National Product will be reduced relative to the value of National Income to the extent that the price paid for subsidized D is below the revenue received by the domestic producers of D. This, in fact, would appear to be the effect on the data of national income whenever the purchasing price of a commodity is lowered below average revenue through the use of a state subsidy.

Similarly the casual sequence of ex ante "real" effects on prices, average revenues, gross expenditure, output, and employment are precisely reversed with the use of the techniques of this second category of protective measures, as compared to the use of the techniques of the first category or to the imposition of excise taxes.

There are finally those techniques of the third category of protective measures, which operate through coercion or subsidy to induce direct and specific changes in the patterns of fabrication and/or of consumption, rather than relying on the consumption-effects of changed price ratios. Inasmuch as subsidies are used to induce such direct changes in fabricating practice, any higher operating costs might be over-compensated for and the end-product price level might thus be lowered with a discrepancy thereby created between the value of National Income and Gross National Product in favor of the former. That subsidies for this purpose would, in fact, reduce end-product prices is neither necessary nor probable. In general no regular effect on the *ex post* data of National Income is attributable to the use of these techniques.

The effect of use of the third category techniques of trade protection on *ex ante* effects on the level of "real" income and on employment is likewise equivocal. It could be argued, however that a pattern of resource use imposed by such techniques in contradiction to that which would have resulted from out of the play of market forces and free entrepreneurial choice, would result either in less efficient factor combinations and hence in a lower level of output for any level of factor inputs, and/or would result in a deviation from the preferred pattern of production and consumption for the given output potential. Of course, here as with excise taxes the arbitrary reordering consumption patterns might cause a reordering of resource (factor) flows which would variously be to the advantage or to the disadvantage of particular consumers, would possibly raise or lower the level of production costs depending on the coincidence of external economics and diseconomies in the particular areas of output expansion and contraction, would influence the development of technology, and would tend to reshape consumer tastes and preference norms. Less efficient factor combination would imply a lower real income for any given level of resource use, but with consumers holding fast to some level of real consumption, i.e., adjusting the level of monetary expenditure in order to maintain a particular mode of living, the net effect may be a more complete utilization of available resources with higher employment and money-income levels stimulating further increases in gross output.

Not only do these alternate technique for trade protection thus have an impact on the national levels of money-income and of real output, but also the use of these techniques would seem variously to effect the distribution of income between economic groups in ways other than those indicated above as "price-effects". Thus for example the protection of internal trade through the imposition of

first category techniques, which operate through raising the domestic price of F, will divert income from the consumers of F to whomever is able to appropriate the margin between the world and the domestic price of F. Where the government appropriates this differential, as it does in the case of a tariff, then the income shift is from the consumer of F to, presumably, the taxpayer (assuming no change in the level of Government debt). Where protection is effectuated by raising the world and the domestic price of F, as in the "ever-normal grannary" type of scheme sometimes implicit in contemplated international commodity agreements or as takes place in certain quasi-strategic stockpiling programs, the income shift is from the taxpayer and the consumer of F to the foreign seller of F. Protection through second category techniques which, through subsidy, reduce the domestic price of D will inevitably shift income from the taxpayer to the consumer of D, assuming again that the level of government debt is not affected thereby.

III. CASE STUDY IN THE CHOICE OF A TECHNIQUE FOR TRADE PROTECTION

To illustrate considerations entering into the actual choice of a method of trade protection, we take as an example the synthetic rubber industry in the United States. This industry was created by the Government in a desperate effort to offset the Japanese conquest of the Far Eastern sources of natural rubber during World War II. At the end of the war it was thought that the new industry could not for long continue to exist in competition with natural rubber, bu that for security reasons it was necessary to maintain an annual output sufficient to keep in operation a "nucleus" industry large enough to enable the rapid expansion of domestic production in the advent of another crisis.

As this author has shown elsewhere, the level of synthetic rubber production which the Government decided to maintain was decided on the basis of an intercine struggle between private groups and public agencies all with special stakes involved [3]). In any event it was decided to maintain a minimal annual output of synthetic rubber [4]), and it was therefore necessary to choose some technique to accomplish this purpose. Among the parties-at-interest to this

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[3]) Cf. the author's "The Sale of the Synthetic Rubber Plants" *The Journal of Industrial Economics* November 1953.

[4]) Consisting of 220.000 tons of GR-S and Butyl rubbers, raised after the Korean War to 510.000 tons.

choice were the consumers of "D" the protected, domestically-produced synthetic rubber, and the consumers of "F" the competitive, foreign natural rubber. The primary consumers of D and F were the companies manufacturing tires, and it was the interest of these companies which was dominant in the choice of a technique for trade protection. Secondary consumers of end-products (tires) were directly affected by the choice of a technique but, because they were unorganized, uninterested and remote from the arena of political action, no pressure was exerted on their behalf in the choice of a technique of protection, except inasmuch as their interest was coincident with that of the tire companies.

The consumer interest stood to lose through the use of techniques of the first category, and to gain through the use of techniques of the second category. And here the consuming group successfully resisted the use of techniques of the first category, e.g., tariffs or quotas which would have raised the domestic price of imported natural rubber. Another party-at-interest to this choice was the taxpayer. The taxpayer might gain through the use of certain of the techniques of the first category, and would inevitably lose through the use of techniques of the second category where the price of synthetic rubber would be reduced below the world price of natural rubber through subsidies sufficiently to maintain the desired level of synthetic rubber consumption. The taxpayer interest was represented by the members of Congress who must enact the law setting up the desired level of protection. In American politics the conscientious Congressman usually identifies the "public interest" with the taxpayer interest. Therefore, in the taxpayer's interest, the use of subsidy, and hence the use of the second category techniques of protection were ruled out of the discussion.

A third major party-at-interest was the producers and importers of "F", natural rubber. These producers and importers, given a level of protection for D, would have benefited through the use of technique of the second category, i.e., subsidies. But on the other hand the primary opposition of the natural rubber producer and importer was to the long term continuation of protection *per se*, and on this account the natural rubber producer and importer was especially apprehensive of outright or hidden subsidies which might have alligned the powerful consumer interests permanently in favor of a continuing policy of protection for synthetic rubber.

A fourth important party-at-interest was the producer of products, in this instance the scrap rubber industry, competitive with D and F. The scrap rubber producer would benefit by the adoption of techniques of the first category, and would lose by the use of techniques of the second category. Thus the interest of the scrap

rubber producer was diametrically opposed to the interests of the tire manufacturers consuming D, but this opposition was cancelled out by the fact that scrap rubber industry is largely controlled by the rubber tire industry.

Thus the two primary parties-at-interest in the choice of a technique for synthetic rubber protection was the industrial consumer opposing techniques of the first category which would raise the price of natural rubber that they must consume along with the synthetic; and the taxpayer represented through the expenditure-conscious Congressman, opposing the use of techniques of the second category which, through subsidy, would lower the price of synthetic rubber below its costs. As might be expected, therefore, the choice centered on techniques which would protect the output of synthetic rubber without raising the price of natural and without subsidizing synthetic. One proposal favored by many was the so-called "certificates plan" described earlier above, which gave to synthetic rubber buyers rights, in the form of certificates (which they could use or resell) to procure natural rubber at world prices in some fixed proportion to the amount of synthetic rubber which they had purchased. No natural rubber could be imported except through the use of these certificates. This technique was rejected partly because of its novelty and partly because it seemed to involve the costly complication of a new market for certificates, and thus to add a new variable and new uncertainties to the already highly speculative raw materials purchasing problem of the tire manufacturers.

Instead the third category technique of "specifications control" was adopted. By administrative order the Government required that all tire manufacturers use a certain fixed proportion of synthetic rubber in the manufacture of specified classes of their product. This technique enabled a highly precise control of synthetic rubber consumption without subsidy and without the need to create a differential between the world price and the domestic price of natural rubber. It had other advantages. It had been in operation during the war and hence the apparatus for its operation was in existence and the industrial consumer was habituated to its use. Administrative and enforcement costs were borne by the Government, which was not objectionable to the industrial consumer. The administrative bureaucracy which had performed these tasks during the war was hardly likely to press for its own dissolution. The technique had another characteristic which probably favored its retention. In fixing the natural-synthetic ratio, it eliminated an important variable in the speculative area of raw material purchasing and hence stabilized the conditions of production in the

industry. The technique was also alleged to permit the control of fabrication for strategic purposes, e.g., requiring producers to develop the capacity for substituting the synthetic for the natural product in the fabrication of items of strategic importance. In fact, however, control was never exercised with anything in mind but to maximize the convenience of the industrial consumer.

Thus a technique was adopted to maintain a planned output of synthetic rubber. But here, as is so often the case in political affairs, events rendered the plan of little relevance. Throughout the period of Government tutelage, except for a brief period in 1947, demand for synthetic rubber was in excess of supply, and what was intended as a technique for protecting domestic rubber output became in fact a system for rationing synthetic rubber output as a fixed ratio of classes of rubber products produced. The new industry turned out to be commercially viable, and profitable. During 1955 it was sold into private ownership. The expected need for protection was illusory. Under private ownership synthetic rubber output in the United States has been greatly expanded and competes with natural rubbel not only in the United States but in the world market as well.

LES EFFETS FISCAUX DES TECHNIQUES ALTERNATIVES POUR LA PROTECTION COMMERCIALE

par R. SOLO

RÉSUMÉ

Les techniques particulières que l'on utilise pour garantir un certain niveau de production à une industrie intérieure face aux importations étrangères exercent des effets sur l'attribution des ressources, sur la répartition intérieure du revenu et sur les aggrégats comprenant le Revenu national et le Produit national brut. Ce sont des effets imputables au choix des techniques en tant que techniques, mises à part les conséquences sur la protection commerciale. On peut considérer qu'il existe trois types distincts de techniques de protection commerciale ou des combinaisons de ces types. Le premier type comprend celles qui élèvent le prix intérieur des biens importés (F) au-dessus du prix intérieur des biens indigènes protégés (D). Le second type comprend celles qui abaissent le prix intérieur de D au-dessous du prix mondial de F en monnaie intérieure. Le troisième type comprend celles qui favorisent D en demandant à une règlementation administrative ou à une subvention un modèle spécifique d'utilisation des ressources, soit pour la fabrication, soit pour la consommation. Ces techniques alternatives employées afin d'obtenir un degré de protection identique auront des effets différents (et multiples) sur les prix et donc sur la répartition du revenu et sur l'affectation des ressources. Tout comme les droits d'accise préférentiels enployés pour faire rentrer des recettes, agissent par une modification intentionnelle des rapports de prix servant à équilibrer le marché et en conséquence produisent des effets sur la répartition du revenu et l'affectation des ressources en sus des conséquences de la perception de l'impôt — de même ces techniques qui modifient à dessein les relations équilibrantes des prix ont des effets sur la répartition du revenu en sus des conséquences de la protection. Comme ces effets sont exactement analogues à ceux des droits d'accise et des subventions, l'effet sur les prix des deux premiers types de techniques de protection commerciale peut être déduit de la théorie générale des droits d'accise préférentiels. L'effet du troisième type sur les prix est équivoque. Il peut avoir des avan-

tages en ce qu'il élargit le champ de l'interventionnisme social. Il présente des inconvénients en ce qu'il provoque de nouvelles distorsions dans l'ajustement de l'ensemble du marché à l'emploi sélectif des ressources disponibles. De plus, l'emploi des techniques des premier et deuxième types peut créer des divergences, comme le font certaines subventions et certains droits d'accise, entre le Revenu national et le Produit national brut. Des effets réels ex ante sont possibles. Dans la mesure où des techniques du troisième type fourniraient des combinaisons de facteurs moins efficaces que celles qui résulteraient de l'emploi de techniques alternatives, leur emploi impliquerait un revenu réel plus bas pour tout niveau donné d'utilisation des ressources ou un niveau plus élevé de demande globale en fonction d'un niveau donné de consommation réelle. Les parties intéressées spécialement et diversement touchées par le choix de techniques alternatives de protection commerciale sont les vendeurs étrangers et les producteurs indigènes de F, les producteurs étrangers et indigènes de produits concurrents de F et D, des producteurs pour qui D et F sont facteurs de production, des importateurs de F, des consommateurs de produits incorporant D et F et les contribuables. La corrélation entre le choix de mesures pour la protection commerciale et les intérêts de ces groupes trouve une illustration dans ce que fut la politique économique antérieure des U.S.A. concernant la protection du caoutchouc synthétique.

BOOK REVIEWS/CRITIQUES

Financing Highways. Symposium conducted by the Tax Institute November 8-9, 1956, Princeton (Princeton: Tax Institute Incorporated, 1957. vi + 217 pp.)

This volume is the latest of the symposium volumes published by the Tax Institute. It contains eighteen papers on widely varied topics within the broad area of highway finance. Most of these papers are concerned with the problems that have arisen, or that may occur, as a result of the provisions of the Federal Aid Highway Act of 1956 in the United States.

Financing Highways is divided into five parts, each of which includes from two to four papers on a significant central topic. The papers in each part will be reviewed separately in the following paragraphs, and finally the volume as a whole will be appraised.

Part One has as its central topic "The Role of an Adequate Highway System in the National Economy." The best paper in this part, in my opinion, is written by Mr. Robinson Newcomb, who has as his subject: "What Can We Get Under the New Highway System?" In this paper Mr. Newcomb attempts to ascertain how much the new highway program in the United States is going to cost, and how much tax revenue will be needed to pay for it. His is the only paper in the entire volume that includes an amount of statistical data, and from this material he predicts the future growth of traffic and the costs of highway construction and maintenance. His method of forecasting appears to be logical and based upon the empirical evidence presented. Wilfred Owen's article on "What Do We Want the Highway System To Do?" sets forth a number of rather general and obvious objectives, e.g., our highway system should meet the needs of our expanding economy, keep pace with technological growth, and enhance our communities. "Where Do We Go From Here in Highway Development?" by Arther C. Butler presents the overly-familiar propaganda-like arguments of the large highway-user organizations. There are some erroneous implications in this paper, and some weak and tired arguments, e.g., a third structure tax on highway-users is *per se* bad; motor fuel taxes accurately reflect the travel characteristics of all vehicles; third structure taxes destroy reciprocity agreements between states. The discussion that follows this part is largely on things political rather than economic.

Part Two contains four articles on the general topic of "Reapportioning Fiscal Responsibility-Impact of New Program on State

and Local Governments." Much of the article by Edward A Lutz on the "Effect of New Federal Aaid Highway Act on Federal-State Relations" summarizes the problems, and indicates the planning needed by state and local governments to meet the requirements of the Federal Act. Frank Bane's "Financing the State's Share of the Highway System" is interesting and pertinent, but much too brief. Frank C. Moore on "The States Responsibility for State-Local Action" presents a paper with but little substance for economists, while Frank W. Herring in "The City and the Transport Revolution" introduces, but does not solve, the problems of city planning in a motorized age. The discussion, although scattered and confused, is interesting.

Part Three is on a subject of great interest to economists working in the field of highway taxation and finance. Its central topic is the "Role of Highway User Revenues in Financing the Program," and it contains what is, in my opinion, the outstanding article in this volume: "Financing Urban Roadways", by Lyle C. Fitch. In this paper Mr. Fitch reviews the proposal that users should be taxed on a social cost basis, and makes several excellent suggestions on how such taxes could be used to ration road space in metropolitan areas. He does not discuss one important problem associated with a social cost tax base, which is how to set the amount of the tax in a non-arbitrary manner, but he does summarize and review the concept of social cost, and adds some of his own ideas, which makes for an excellent paper. The other papers in this part are not up to this standard. Albert J. Wedeking has written an interesting and informative paper on "The Outlook for Present and Future Toll Facilities." However, the paper by William D. Ross on the "Basic Theory of State Highway Financing" is somewhat disappointing. The *basic* theory of highway financing, to me, is not greatly concerned with the elementary notions of Adam Smith in his brief mention of this subject; nor with Keynesian compensatory fiscal policy. The remarks by Dean Ross on these subjects seem to me to be obvious to every economist, and to avoid the very real theoretical problems of highway finance and taxation.

Part Four contains three papers on the "Problems Arising Out of Specific Taxes", which is also a topic significant for students of highway finance. The first paper, by G. P. St. Clair on "The Problem of Federal Truck Taxation" outlines the investigation that the Bureau of Public Roads is making in order to establish an equitable system of special taxes on highway users. Although the Bureau apparently favors the incremental cost method of taxation

(and rightly so) it is also examining other theories and methods. The great respect that highway economists have for the staff of the Bureau of Public Roads will, it is hoped, be further enhanced by these studies. Stanley J. Bowers' paper on "Problems Arising Out of Third Structure Taxes" presents the difficulties stemming from the Ohio axle-mile tax, from the viewpoint of the administrator. This article is carefully reasoned, and seems to answer many of the attacks that have been made on this controversial tax. The paper "The Effects of the New Federal Program on State Motor Fuel Tax Administration" by Armand J. Solomon, Jr. deals with the enforcement of the state and federal gas taxes. It contains many valuable suggestions drawn from the author's long experience in this field.

Part Five is on the topic "Expediting the Highway Program." The first paper, entitled "How To Get Citizen Support for Highway Financing" by Francis Jacobs describes briefly the history of Kansas highways. It is written in a chamber-of-commerce manner and, while interesting, does not possess the universality needed to make it pertinent to other situations. Frederick L. Bird has written the last paper in the volume, "Removing the Financial Roadblocks", which contains a worthwhile review of the difficulties of financing roads through the issue of securities, and offers a number of suggestions for eliminating these problems.

Actually, this review would be far from accurate if it described this volume as merely good or bad. Some of the papers in this collection, without question, are excellent. Others, while good, treat their subjects too briefly to do them justice. Still others are not very objective, and are slanted towards a particular interest. This latter type of paper, while not good economics, is usually good reading, and does give the reader the true flavor of a symposium of this sort, where an attempt is made to gather speakers representing all interests. Perhaps the principal objection to many articles is that problems are presented which have obvious solutions, or which have general solutions, or for which no solutions are given. In retrospect, however, the book is interesting, and should be useful to the highway economist as a summary of positions and arguments. It should also be useful to the non-specialist as an introduction to the problems of highway finance in the United States.

Joseph W. McGuire,
University of Washington
Seattle, Washington

Compilation of Legal Provisions, Regulations, Circulars and Forms relating to Double Taxation Relief in the United Kingdom of Great Britain and Northern Ireland, by F. E. Koch and Richard Moss, Publication of the International Bureau of Fiscal Documentation, No. 10, Amsterdam, 1957 (Price 17/-, $ 2.25).

In order to realise its object the International Bureau of Fiscal Documentation issues, amongst other things, the series of Publications. Sofar these Publications only concerned double taxation conventions. Of another nature is no. 10, the latest copy of these series. This copy comprises official material by way of Statutes, Regulations, Circulars and Forms concerning double taxation relief of one country, viz. the United Kingdom. I warmly welcome this novelty and express the hope that more copies of similar nature will follow. The availability of comprehensive and authentic information on double taxation relief of a country is of great importance to everyone who has to deal with this relief.

The British income tax system, owing to the extensive concept of income for tax purposes, often gives rise to international double taxation. As over the years the tax rates rose, the double taxation burden became intolerable and relief from this burden seemed to be inevitable. This relief was granted step by step, especially after the second worldwar. The basic information of this slowly extended British tax relief system in respect of income tax and death duty is given us in Publication no. 10. It may be observed that the booklet does not pronounce a judgment on the creditsystem. It is only the authors' aim to facilitate reference to the official material concerning double taxation relief in the United Kingdom. This material has been reproduced as completely as possible with the major exception of the texts of double taxation conventions. In my opinion this aim is well realised, not least as a result of the many practical examples as illustrations of the difficult British tax relief system. It is regrettable that the booklet, owing to its appearance in March 1957, cannot give information about the recent measures concerning the overseas trade corporations (Finance Act 1957), which income - generally speaking - is not subject to income tax when earned, but at the time of distribution. Undoubtedly this Publication would have been even more valuable.

A recent thorough and critical study of the British relief system has been given by Flick for the German Group of the International Fiscal Association; this German interest can be explained by the fact that the creditsystem has been accepted in Germany for the

new unilateral regulations to avoid double income taxation [1]). This bookreview is not the place for mentioning the advantages and shortcomings of the existing creditsystem, especially in its relations with underdeveloped countries. I only make a passing reference to a provision in the recently negotiated treaty between the United States and Pakistan which would permit a United States corporation to credit against its United States tax not only the tax pail by it to Pakistan, but also that amount of the Pakistan tax which it is excused from paying. This is a very interesting development of the creditsystem.

J. H. Christiaanse,
Ministry of Finance
The Hague, Netherlands

[1]) Dr. jur. Hans Flick „Die Massnahmen des Vereinigten Königreichs von Grossbritanien und Nordirland zur Ausschaltung der internationalen Doppelbesteuerung bei den direkten Steuern", Bergisch Gladbach, 1957.